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ABSTRACT

During 1981-82 approximately 17 percent of all Graduate Records Examinations (GRE) General Test takers were foreign nationals from over 140 countries. Heavily concentrated in scientific-technical fields, foreign nationals made up almost one-half of all engineering and one-third of all math-science examinees. Most were non-native English speakers whose average verbal and analytical scores were considerably lower than those of native English speakers (both U.S. and foreign) in similar fields. Foreign examinees' English language background did not affect the quantitative mean profile which was similar to that of U.S. examinees. Detailed comparative profiles of GRE performance data are provided for the general foreign and U.S. examinee populations, and for foreign examinees classified by country of citizenship. In addition, the study analyzes GRE group performance of foreign and U.S. examinees by age, sex, reported English language communication status, intended graduate field, U.S. vs other undergraduate origin, repeater vs nonrepeater status, and other personal, academic, and testing-related characteristics. Study findings suggest that GRE General Test data (especially verbal and analytical test data) generated by non-U.S. citizens from non-native English speaking societies should not be treated as comparable to test data for U.S. examinees or examinees from other native-English speaking societies. (Author/BS)

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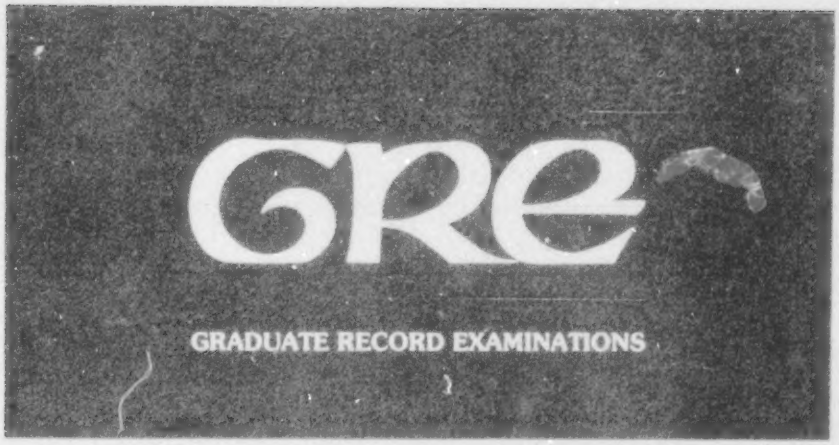

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FOREIGN NATIONALS TAKING THE GRE GENERAL TEST DURING 1981-82:

SELECTED CHARACTERISTICS AND TEST PERFORMANCE

Kenneth M. Wilson

RR84-39
GRE Board Professional Report No. 81-23bP

December 1984

This report presents the findings of a research project funded by and carried out under the auspices of the Graduate Record Examinations Board.

EDUCATIONAL TESTING SERVICE, PRINCETON, NJ

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Foreign Nationals Taking the GRE General Test During 1981-82: Selected Characteristics and Test Performance

Kenneth M. Wilson

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Abstract

During the 1981-82 testing year, foreign nationals representing over 140 countries or territories made up approximately 17 percent of all GRE General Test takers. However, they were heavily concentrated in scientific-technical fields--for example, almost one-half of all examinees in engineering and one-third of those in math-science fields were foreign nationals. Most of these examinees were non-native speakers of English for whom average scores on the verbal and analytical measures were considerably lower than those of native English speakers (both U.S. and foreign) in similar fields of study. However, the quantitative mean profile, by field, of foreign examinees did not vary according to English language background and was quite similar to that of U.S. examinees.

Detailed comparative profiles of GRE performance data are provided for the general foreign and U.S. examinee populations, and for foreign examinees classified by country of citizenship. In addition, the study analyzes GRE performance of groups of foreign and U.S. examinees defined in terms of age, sex, reported English language communication status, intended graduate field, U.S. vs other undergraduate origin, repeater vs nonrepeater status, and other personal, academic, and testing-related characteristics.

Study findings suggest that GRE General Test data (especially verbal and analytical test data) generated by non-U.S. citizens from non-native English speaking societies should not be treated as comparable to test data for U.S. examinees or examinees from other native-English speaking societies.

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Foreign Nationals Taking the GRE General Test During 1981-82: Selected Characteristics and Test Performance

Kenneth M. Wilson
Educational Testing Service

Introduction

The Graduate Record Examinations (GRE) General (Aptitude) Test, widely used in evaluating the academic qualifications of applicants for admission to graduate schools and departments, is oriented linguisitically, culturally, and educationally to citizens of the United States. However, large numbers of foreign nationals also take the GRE General Test each year in support of their admission applications.

This study was designed as a comparative analysis of selected characteristics and the GRE General Test performance of U.S. and foreign examinees generally, and by country of citizenship.* It employed data from GRE files on selected personal, academic, and testing-related characteristics of examinees tested between October 1981 and June 1982 (during the 1981-82 testing year). Data for 26,455 foreign nationals, and a 10 percent sample of U.S. citizens (N = 15,638) were analyzed comparatively.

The Data

The responses of examinees to certain items on the GRE registration form and to selected GRE background questions provided data on the personal, academic, and testing-related variables that were selected for analysis. Responses to GRE registration-form items (Exhibit A) provided data on date of birth, sex, and current educational status (Items 6, 7, and 8); the current or most recent undergraduate school attended (Item 5); test-center location (Item 11); and the institutions and departments designated to receive score reports (derived from responses to Item 13).

Data on U.S. citizenship status and country of citizenship were provided by responses to questions BQ-B.1 and B.2 (Exhibit B). Responses to BQ-E.1 provided the basis for identifying examinees who reported that they were better communicators in English than in any other language (referred to as English primary language or EPL examinees) and their counterparts who reported better communication in some other language (English second language or ESL examinees); information regarding the "native or best" language of communication was provided by responses to BQ-E.2.** In evaluating the EPL-status classification based on BQ-E.1, it is important to recognize that EPL status as reported by examinees from a major native-English speaking society is not necessarily

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* For a summary and discussion of the findings of this study, see Wilson (1984a).

** The historically relevant native language and the current "best" language may be different. See discussion of language in Section 3.

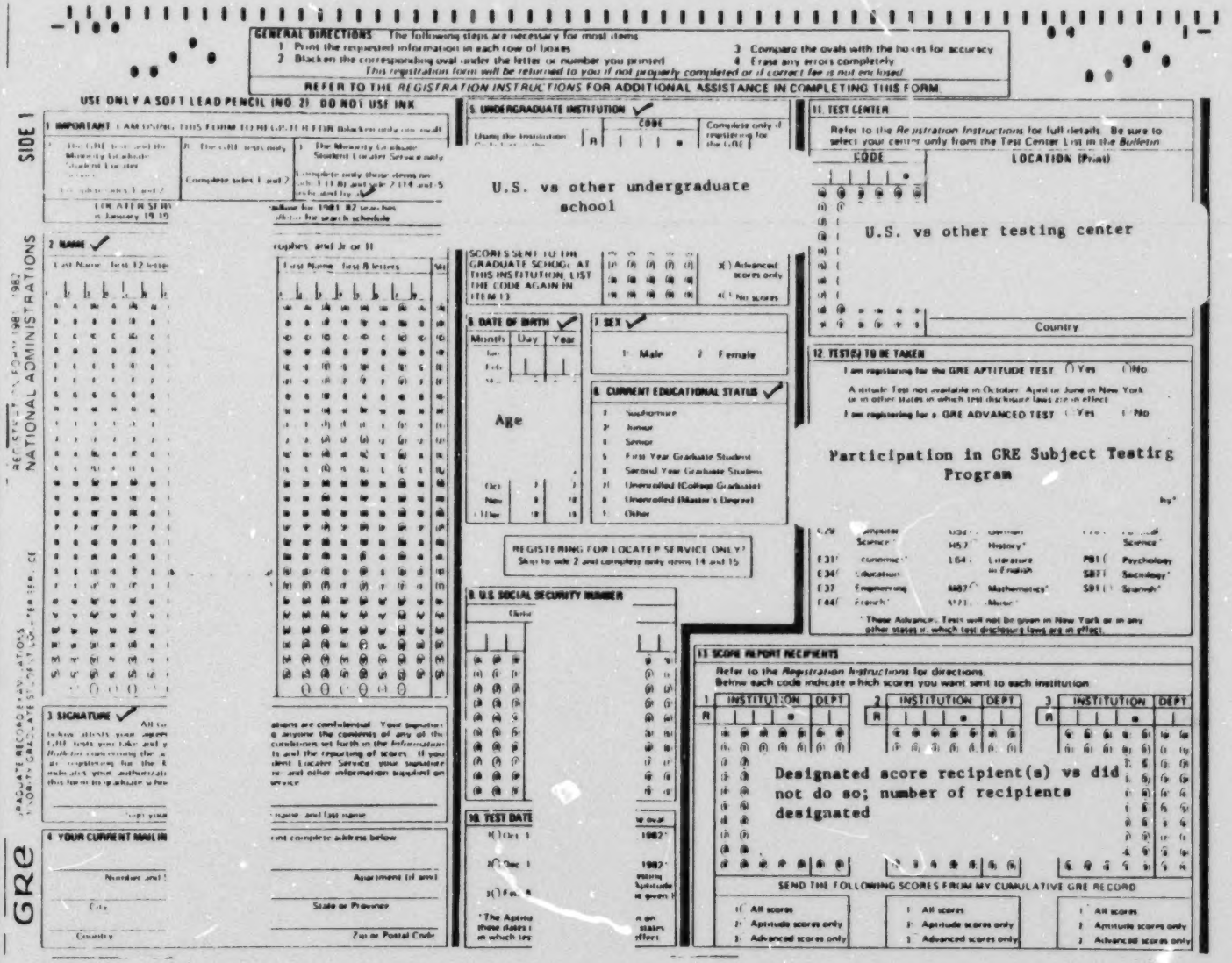
U.S. vs other undergraduate school
U.S. vs other testing center
Age
Participation in GRE Subject Testing Program
Designated score recipient(s) vs did not do so; number of recipients designated

Exhibit A. Registration form items yielding selected study data

Exhibit B

GRE Background Questions, 1981-82

Item 15 (Background Information Questions). Your answers to these questions are completely optional. The information will be used for research and, if you are taking the GRE, in group statistics describing GRE student populations. In both of these uses, individual responses are never communicated to any institution or agency. In addition, your responses will not affect your scores or reporting of them in any way. If you are registering for the Minority Graduate Student Locater Service, your individual responses to questions in the shaded areas below may be reported to one or more institutions.

If you are completing the registration form to sign up for the tests only, we encourage you to answer all questions, particularly questions A through N and U through X. (You may, however, omit any you do not wish to answer.) *If you are registering for the Locater Service, however, it is essential that you answer all questions in the shaded areas, since the Locater Service will not be able to serve you unless it has all the information provided by your answers to those questions.*

★ A. Have you previously taken one or more GRE tests?

(1) No
(2) Yes—took the test(s) on or prior to September 30, 1981
(3) Yes—took the test(s) more recently than September 30, 1981

If you are not registering for the Locater Service, and your answer to question A is (3), and your responses to the rest of the questions would be the same as they were before, you need not answer the questions again. If your responses to any of the rest of the questions would be different, please respond again to all of them.

★ B.1 Are you a United States citizen, a resident alien in the United States, or neither one? (Specify which one.)

(1) United States citizen
(2) Resident alien in the United States
(3) Neither a United States citizen nor a resident alien in the United States

If your answer to B.1 is (1), you need not answer B.2. Skip to C.

B.2 In the Country of Citizenship Code List on page 73, find the code of the country of which you are a citizen. Blacken the spaces for that country's code number.

If you are a citizen of the United States or a resident alien in the United States, answer questions C and D. All others skip to question E.

C. In the State Code List on page 72 find the code number for the state you consider your permanent residence. Blacken the spaces for that state's code number.

D. How do you describe yourself?

(1) American Indian, Eskimo, or Aleut
(2) Black or Afro-American
(3) Mexican American or Chicano
(4) Oriental or Asian American
(5) Puerto Rican
(6) Other Hispanic or Latin American
(7) White
(8) Other

★ E.1 Do you communicate better in English than in any other language?

(1) Yes (2) No

If your answer to E.1 is "Yes," you need not answer E.2. Skip to F.

★ E.2 Find your native (or best) language of communication in the list on page 73. The languages are arranged by geographic area for your convenience. Blacken the spaces for the code number shown. If you do not find your native (or best) language listed, blacken the spaces for code 000.

F. What is your best estimate of the total student enrollment at the school from which you received or will receive your bachelor's degree?

(1) Fewer than 1,000 (2) 1,000-4,999 (3) 5,000-9,999
(4) 10,000-19,999 (5) 20,000 or more

G. Which of the following best describes your undergraduate institution?

(1) Public
(2) Private—no church affiliation
(3) Private—church affiliation

H. In what calendar year did you receive or do you expect to receive your bachelor's degree?

(Please blacken the spaces on your registration form corresponding to the last two digits of the year.)

★ I. Referring to the Major Field Code List on page 72, find your undergraduate major field of study. Blacken the spaces for that field's code number.

★ J. What is your eventual graduate degree objective?

(1) Non-degree study
(2) Master's (M.A., M.S., M.Ed., etc.)
(3) Intermediate (such as Specialist)
(4) Doctorate (Ph.D., Ed.D., etc.)
(5) Postdoctoral study

★ K. Referring to the Major Field Code List on page 72, find the field in which you plan to do your graduate work. Blacken the spaces for that field's code number. If you are undecided, use the following code:

00 Undecided

L. What permanently disabling condition do you have, if any? (Select one only.)

(1) None
(2) Blindness or other visual impairment
(3) Deafness or other hearing impairment
(4) Paraplegia
(5) Learning disability
(6) Other neurological or orthopedic impairment
(7) Multiple handicaps
(8) Other

M. Which of the following best describes the graduate institution you most recently attended or currently attend on at least a half-time basis?

(1) I have never attended graduate school or have attended graduate school on less than a half-time basis only.
(2) Public
(3) Private—no church affiliation
(4) Private—church affiliation

N. In what calendar year did you last attend graduate school on at least a half-time basis?

Blacken the spaces on your registration form corresponding to the last two digits of the year; if you have not attended graduate school, use the following code:

00 I have never attended graduate school or have attended on less than a half-time basis only.

O. In courses in your undergraduate major field only, what grade average have you received so far? (If your college does not use letter grades, please mark the letter grade that is the closest equivalent to your grade average.)

(1) D or lower (2) C– (3) C (4) B– (5) B (6) A– (7) A

P. Considering only your last two college years, approximately what overall grade average have you received? (If your college does not use letter grades, please mark the letter grade that is the closest equivalent to your grade average.)

(1) D or lower (2) C– (3) C (4) B– (5) B (6) A– (7) A

Q. Is there any one geographic region in which you would prefer to attend graduate school? (Select one only.)

(1) New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)
(2) Mid-Atlantic (Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania)
(3) South (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia)
(4) Midwest (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin)
(5) Southwest (Arizona, California, Nevada, New Mexico, Oklahoma, Texas)
(6) West (Alaska, Colorado, Hawaii, Idaho, Montana, Oregon, Utah, Washington, Wyoming)
(7) Any region would be acceptable

R. About how many hours per week did you spend working for wages during your most recent school year?

(1) 0 (2) 1-5 (3) 6-10 (4) 11-20 (5) More than 20

S. About how many hours per week did you spend in community service activities during your most recent school year?

(1) 0 (2) 1-5 (3) 6-10 (4) 11-20 (5) More than 20

★Questions on which data in this report are based.

Exhibit B, continued

T In which one of the following achievements have you received your most important honor, award, prize, or other recognition? (Select one only.)

(1) Student government or organization
(2) Professional—an award or prize for fieldwork or publication of a scholarly article or book
(3) Community service—election or appointment to a community service unit, activity, or group
(4) Literary—editing the college paper, yearbook, or literary magazine or having a poem, story, or article published in a public paper or magazine
(5) Artistic—a high rating in a music contest, a part in a play, opera, or show, or an award in an art competition
(6) Scientific—an award or recognition in a science competition
(7) Athletic—a letter in athletics
(8) None of the above categories

U What was the highest level of education attained by your father?

(1) Did not graduate from high school
(2) High school graduate
(3) Beyond high school but did not graduate from a four-year college
(4) Graduate of a four-year college
(5) Beyond college but did not receive a graduate or professional degree
(6) Graduate or professional degree

V What was the highest level of education attained by your mother?

(1) Did not graduate from high school
(2) High school graduate
(3) Beyond high school but did not graduate from a four-year college
(4) Graduate of a four-year college
(5) Beyond college but did not receive a graduate or professional degree
(6) Graduate or professional degree

W What was the approximate average annual income of your family during the time when you were in high school?

(1) Less than $8,500 (2) $8,500 to $15,000
(3) $15,000 to $25,000 (4) More than $25,000

X Which of the following best describes the location of the high school you attended?

(1) Large city
(2) Suburb of a large city; metropolitan area
(3) Other city or town
(4) Farming community or other rural area

comparable in meaning to a similarly reported status for examinees from societies in which English is not a native language, but is an official language and/or an academic lingua franca. For the latter, it is assumed that EPL status reflects a non-native pattern of English language acquisition and usage.

Other variables selected for study were previous experience with GRE tests (BQ-A), degree goals (BQ-J), undergraduate and graduate major fields (BQ-I, BQ-K), and highest level of parental educational attainment (BQ-U, BQ-V). Exhibit C shows the basic classifications of fields that were used in the study.

Scores on the verbal, quantitative, and analytical sections of the GRE General Test were available for each examinee. The characteristics of the verbal and quantitative measures are well known; less is known regarding the characteristics of the analytical ability measure, first introduced in 1977 and introduced in its present form in the 1981-82 testing year. Emphasis in this study was on patterns of verbal and quantitative performance, although data on the analytical measure were included throughout.

The study variables are summarized below:

Personal and background variables

- o Country of citizenship
- o Resident alien (permanent) vs other non-U.S. citizenship status
- o English communication status (EPL or English primary or best language vs ESL or English secondary language)
- o Native (or best) language
- o Sex
- o Age in years, calculated from date of birth
- o Father's educational level
- o Mother's educational level

Academic variables

- o Degree goal (doctorate vs master's)
- o Undergraduate major field
- o Intended graduate major field
- o U.S. versus other undergraduate school
- o Educational level (at time of testing)

Testing-related variables

- o Tested in U.S. center versus other center
- o Previous experience with GRE versus other status (repeater versus nonrepeater status)
- O Designated institututions or departments to receive score reports vs did not do so (reporting vs nonreporting behavior); for reporting examinees, number of institutions or departments designated
- o GRE Subject (Advanced) Tests (did or did not take a Subject Test).

Exhibit C

Classifications of Disciplines within Broad Areas

Humanities:

Arts-Dramatic Arts
Music
Fine Arts, Art, Design

Other Humanities-Archaeology
Art History
Comparative Lit.
Far Eastern Lang.
German
Linguistics
Philosophy
Russian
Speech
Other Humanities

Architecture
Classical Lang.
English
French
Italian
Near Eastern Lang.
Religion
Spanish
Other Foreign Lang.

Social Sciences:

Education-Education
Educational Admin.
Educational Psych.
Guidance and Counseling
Physical Education

Other Social Sciences-Business and Commerce
Communications
Industrial Relations
Journalism
Law
Library Science
Public Administration
Social Work

Behavioral Sciences-American Studies
Economics
History
Psychology
Social Psychology
Urban Development
Political Science and Government

Anthropology
Geography
International Rel.
Slavic Studies
Sociology
Other Social Sciences

Biological Sciences:

Biosciences-Biochemistry
Biology
Biophysics
Botany
Genetics
Microbiology
Physiology
Zoology
Other Biological Sci.

Health-Anatomy
Audiology
Bacteriology
Dentistry
Health Admin.
Medicine
Nursing
Nutrition
Occupational Therapy

Optometry
Osteopathy
Parasitology
Pathology
Pharmacology
Pharmacy
Physical Therapy
Public Health

Other Applied Biological Sciences-Agriculture
Entomology
Forestry
Home Economics
Veterinary Medicine

Physical Sciences:

Engineering-Aeronautical Eng.
Chemical Eng.
Civil Eng.
Electrical Eng.
Industrial Eng.
Mechanical Eng.
Other Eng.
Metallurgy
Mining

Math. Science-Applied Mathematics
Computer Sciences
Mathematics
Statistics

Physical Science-Astronomy
Chemistry
Physics
Geology
Oceanography
Other Physical Sciences

The Sample and Study Procedures

A total of 188,171 examinees responded to the question on U.S. citizenship status; of these, 156,380 (83.1 percent) reported U.S. citizenship and 31,791 (16.9 percent) reported non-U.S. citizenship. Of the foreign nationals, 5,336 did not provide a country of citizenship code, and their records were not included in the study which was based on data for the 26,455 foreign examinees who named a country of citizenship and a 10 percent random sample of U.S. citizens (N = 15,638).

Over 140 countries (or territories, also referred to as countries for convenience throughout the study) were represented by two or more examinees. Given the large number of countries represented in the sample (N = 142), the relatively small size of most examinee contingents (98 countries were represented by fewer than 100 examinees, 81 by less than 50), and the fact that the 25 largest contingents (referred to as "leading contingents") accounted for 80 percent of all foreign examinees, emphasis throughout the study was on data for the 25 leading contingents. However, statistics for all foreign examinees and for examinees by world region were compiled using data for examinees from all countries, not those from the leading contingents only.

Summary data on the basic personal, academic, and testing-related study variables were compiled for all foreign examinees without regard to country of citizenship, for the 10 percent sample of U.S. examinees, and for foreign nationals classified by country (all countries) and world region. GRE summary data were compiled for the same classifications. In addition, GRE score means and standard deviations were computed for subgroups, within the respective citizenship classifications, defined in terms of age, sex, EPL vs ESL status, graduate major areas, and status on the other study variables.

Some Limiting Considerations

In evaluating the data presented in this study, certain general considerations dictate the exercise of interpetive caution and inferential restraint.

- The data are descriptive of U.S. examinees and foreign nationals who happen to have become members of the GRE examinee pool during 1981-82 as the result of complex processes of academic, socioeconmic, and perhaps political selection, and self-selection, that undoubtedly vary from country to country.

- Examinees from various foreign countries are not necessarily representative of the populations of prospective or enrolled graduate-level students in their respective countries; foreign examinees who take the GRE General Test are not necessarily representative of all foreign graduate students enrolled in the United States.

- Given the diversity in the organization of education systems throughout the world, some background questions (for example, regarding educational status or attainment framed in terms of the U.S. system) may not have precisely the same meaning for all foreign nationals.

Organization of the Report

Data on the distribution of foreign examinees by country and world region, and by U.S. citizenship status (resident alien vs other status) are presented in Section 1. Section 2 presents data on the personal, academic, and testing-related characteristics of U.S. and foreign examinees without regard to country of citizenship; in Section 3, comparable descriptive profiles are provided for examinees classified by country of citizenship (25 leading contingents) and world region (all countries within each region).

Sections 4, 5, and 6 present data on GRE General Test performance. Section 4 provides GRE score means and standard deviations for the 10 percent sample of U.S. examinees and for foreign examinees generally, for subgroups defined in terms of age, sex, degree goal, EPL vs ESL status, intended field, and the other variables. Section 5 examines differences in GRE score means and standard deviations by country of citizenship. Analytic emphasis is on assessing the differences in verbal performance that are associated with differences among countries in the patterns of English language acquistion and usage, and the corresponding differences in average levels of developed English proficiency that are characteristic of contingents of U.S.-graduate-school-bound students from the respective countries. Section 6 provides data by country of citizenship on GRE performance by sex, age, intended field, and status on the other study variables. These data parallel those presented in Section 4 for the U.S. and foreign examinees generally. Additional data are provided in Appendix A and Appendix B.

Section 1

Distribution of Examinees by Country, World Region, and U.S. Citizenship Status

Table 1.1 shows the number and percentage of foreign examinees accounted for by the 25 leading countries (those represented by 200 or more citizens in the study sample) and the respective world regions. The distribution of examinees according to self-reported U.S. citizenship status (resident alien vs other status) is also shown. The 25 countries for which data are provided in Table 1.1 accounted for 21,158 (80 percent) of the 26,455 foreign examinees who named a country of citizenship.

Almost 55 percent of all foreign examinees, and ten of the 25 leading contingents, were from the Asian region; 16 percent were from the Americas, including Canada; 11 percent were from Europe, 9 percent from the Mideast, 9 percent from Africa, and about 1 percent from the Pacific region (principally, from Australia and New Zealand).

Slightly less than one-fifth of the foreign examinees (5,131 of 26,455) reported resident alien status, and 81 percent reported some other non-U.S. citizenship status. Examinees from the leading 25 countries represented 80 percent of all foreign examinees, but only about 70 percent of resident aliens.

Among the leading contingents, those including 30 percent or more resident aliens were Nigeria, Great Britain, West Germany, Iran, Lebanon, and Saudi Arabia. At the other extreme were contingents from Taiwan and India (less than 10 percent), Malaysia, Thailand, Turkey, France, and Greece (all with less than 15 percent).

Table 1.2 shows the number and percentage of examinees, by resident alien vs other status, for all countries with two or more examinees. Although many of the contingents are very small, the listing of countries shows an essentially complete classification of all countries by world region.

Several countries not included among the leading 25 were represented by a relatively large number of resident aliens. For example, 149 of 154 Vietnamese, 69 of 70 Cuban, and 93 of 155 Jamaican examinees reported resident alien status.

Table 1.1

Foreign Examinees Classified by Reported U.S. Citizenship Status:

Data for the Leading 25 Countries and Six World Regions

Country and region	Distribution across countries						Distribution within country	
	All examinees		Resident alien		Other status		Resident alien	Other status
	N	% total foreign	N	% res alien total	N	% other total	%	%
AFRICA	2,173	8.2	601	11.7	1,572	7.4	27.7	72.3
Nigeria	883	3.3	298	5.8	585	2.7	33.8	66.2
AMERICA	4,297	16.2	1,144	22.3	3,153	14.8	26.6	73.4
Mexico	631	2.5	124	2.4	507	2.4	19.6	80.4
Canada	1,470	5.6	326	6.3	1,144	5.4	22.2	77.8
Brazil	294	1.1	51	1.0	243	1.1	17.4	82.6
Colombia	236	0.9	69	1.3	167	0.8	29.2	70.8
Venezuela	396	1.5	60	1.2	336	1.6	15.2	84.8
ASIA	14,443	54.6	1,903	37.1	12,540	58.8	13.2	86.8
Taiwan	3,791	14.3	316	5.2	3,475	16.3	8.3	91.7
Hong Kong	674	2.6	163	3.2	511	2.4	24.2	75.8
India	4,210	15.9	382	7.4	3,828	18.0	9.1	90.9
Indonesia	275	1.0	51	1.0	224	1.1	18.6	81.4
Japan	894	3.4	139	2.7	755	3.5	15.6	84.4
Korea	1,547	5.8	310	6.0	1,237	5.8	20.0	80.0
Malaysia	628	2.4	67	1.3	561	2.6	10.7	89.3
Pakistan	266	1.0	46	0.9	220	1.0	17.3	82.7
Philippines	467	1.8	90	1.8	377	1.8	19.3	80.7
Thailand	778	2.9	88	1.7	690	3.2	11.3	88.7
EUROPE	2,920	11.0	698	13.6	2,222	10.4	23.9	76.1
Turkey	248	0.9	35	0.7	213	1.0	14.1	85.9
Great Britain	599	2.3	198	3.9	401	1.9	33.1	66.9
France	297	1.1	43	0.8	254	1.2	14.5	85.5
West Germany	267	1.0	81	1.6	186	0.9	30.3	69.7
Greece	424	2.6	81	1.6	343	1.6	19.1	80.9
MIDEAST	2,316	11.4	711	13.9	1 505	7.5	30.7	69.3
Iran	1,119	4.2	372	7.3	747	3.5	33.2	66.8
Lebanon	332	1.3	105	2.1	227	1.1	31.6	68.4
Saudi Arabia	222	0.8	73	1.4	149	0.7	32.9	67.1
PACIFIC	306	1.2	74	1.4	232	1.1	24.2	75.8
Australia	210	0.8	45	0.9	165	1.2	21.4	78.6
ALL NON-U.S.	26,455	100.0	5,131	100.00	21,324	100.0	19.4	80.6
LEADING 25 NON-U.S.	21,158	80.0	3,613	70.4	17,545	81.8	17.1	82.9

Table 1.2

Distribution of Foreign Examinees by Reported Country of Citizenship, World Region, and U.S. Citizenship Status

Country & Region	Number of examinees	U.S. Citizenship status: Resident alien N	%	Other non-U.S. status N	%
AFRICA-TOTAL	**(2173)**	**601**	**27.66**	**1572**	**72.34**
ALGERIA	(101)	23	22.77	78	77.23
ANGOLA	(3)	0	0.0	3	100.00
BOTSWANA	(7)	1	14.29	6	85.71
CAMEROON	(45)	16	35.56	29	64.44
C. AFRICAN REP.	(3)	2	66.67	1	33.33
CHAD	(2)	1	50.00	1	50.00
CONGO	(3)	0	0.0	3	100.00
BENIN	(2)	1	50.00	1	50.00
EGYPT	(176)	38	21.59	138	78.41
ETHIOPIA	(70)	26	37.14	44	62.86
GHANA	(143)	37	25.87	106	74.13
GUINEA	(2)	0	0.0	2	100.00
IVORY COAST	(33)	12	36.36	21	63.64
KENYA	(118)	26	22.03	92	77.97
LIBERIA	(50)	10	20.00	40	80.00
LIBYA	(48)	14	29.17	34	70.83
MALAWI	(25)	1	4.00	24	96.00
MALI	(20)	5	25.00	15	75.00
MOROCCO	(32)	5	15.63	27	84.38
MOZAMBIQUE	(3)	0	0.0	3	100.00
@NIGERIA	(883)	298	33.75	585	66.25
ZIMBABWE	(41)	11	26.83	30	73.17
SENEGAL	(6)	4	66.67	2	33.33
SIERRA LEONE	(39)	8	20.51	31	79.49
SOMALIA	(14)	3	21.43	11	78.57
SOUTH AFRICA	(112)	25	22.32	87	77.68
SUDAN	(34)	7	20.59	27	79.41
SWAZILAND	(22)	4	18.18	18	81.82
TANZANIA	(41)	2	4.88	39	95.12
TOGO	(5)	1	20.00	4	80.00
TUNISIA	(19)	7	36.84	12	63.16
UGANDA	(39)	9	23.08	30	76.92
UPPER VOLTA	(3)	1	33.33	2	66.67
ZAMBIA	(29)	3	10.34	26	89.66
AMERICA-TOTAL	**(4297)**	**1144**	**26.62**	**3153**	**73.38**
BAHAMAS	(29)	11	37.93	18	62.07
BARBADOS	(13)	6	46.15	7	53.85
BELIZE	(10)	5	50.00	5	50.00
BERMUDA	(11)	5	45.45	6	54.55
COSTA RICA	(46)	10	21.74	36	78.26
CUBA	(70)	69	98.57	1	1.43
DOMINICA	(36)	23	63.89	13	36.11
EL SALVADOR	(28)	8	28.57	20	71.43
GUATEMALA	(42)	10	23.81	32	76.19
HAITI	(30)	16	53.33	14	46.67
HONDURAS	(31)	5	16.13	26	83.87
JAMAICA	(155)	93	60.00	62	40.00
@MEXICO	(631)	124	19.65	507	80.35
NETHERLANDS ANTILLES	(21)	7	33.33	14	66.67
NICARAGUA	(37)	11	29.73	26	70.27
PANAMA	(51)	16	31.37	35	68.63
PUERTO RICO	(12)	9	75.00	3	25.00
TRINIDAD & TOBAGO	(85)	33	38.82	52	61.18
WEST INDIES	(25)	12	48.00	13	52.00
@CANADA	(1470)	326	22.18	1144	77.82
ARGENTINA	(127)	41	32.28	86	67.72
BOLIVIA	(24)	6	25.00	18	75.00
@BRAZIL	(294)	51	17.35	243	82.65
CHILE	(128)	32	25.00	96	75.00
@COLOMBIA	(236)	69	29.24	167	70.76
ECUADOR	(45)	21	46.67	24	53.33
GUYANA	(53)	25	47.17	28	52.83
PARAGUAY	(8)	4	50.00	4	50.00
PERU	(130)	26	20.00	104	80.00
URUGUAY	(23)	10	43.48	13	56.52
@VENEZUELA	(396)	60	15.15	336	84.85

Country & Region	Number of examinees	U.S. Citizenship status			
		Resident alien		Other non-U.S. status	
		N	%	N	%
ASIA-TOTAL	(14443)	1903	13.18	12540	86.82
AFGHANISTAN	(5)	2	40.00	3	60.00
BANGLADESH	(156)	10	6.41	146	93.59
BHUTAN	(9)	0	0.0	9	100.00
BRUNEI	(8)	2	100.00	8	0.0
BURMA	(7)	5	71.43	2	28.57
@TAIWAN	(3791)	316	8.34	3475	91.66
@HONG KONG	(676)	163	24.18	511	75.82
@INDIA	(4210)	382	9.07	3828	90.93
@INDONESIA	(275)	51	18.55	224	81.45
@JAPAN	(894)	139	15.55	755	84.45
KAMPUCHEA	(5)	4	80.00	1	20.00
@KOREA	(1547)	310	20.04	1237	79.96
LAOS	(8)	6	75.00	2	25.00
MACAO	(50)	4	8.00	46	92.00
@MALAYSIA	(628)	67	10.67	561	89.33
MAURITIUS	(8)	1	12.50	7	87.50
MONGOLIA	(9)	5	55.56	4	44.44
NEPAL	(37)	4	11	34	91.89
@PAKISTAN	(266)	[illegible]	[illegible]	228	82.71
@PHILIPPINES	(467)	[illegible]	[illegible]	377	80.73
SINGAPORE	(150)	[illegible]	[illegible]	141	94.00
SRI LANKA	(167)	12	7.19	155	92.81
@THAILAND	(778)	88	11.31	690	88.69
VIETNAM	(154)	149	96.75	5	3.25
PEOPLES REPUBLIC OF CHINA	(146)	39	26.71	107	73.29
EUROPE-TOTAL	(2920)	698	23.90	2222	76.10
@TURKEY	(248)	35	14.11	213	85.89
AUSTRIA	(27)	6	22.22	21	77.78
AZORES	(12)	10	83.33	2	16.67
BELGIUM	(75)	11	14.67	64	85.33
BULGARIA	(2)	2	100.00	0	0.0
CYPRUS	(61)	8	13.11	53	86.89
CZECHOSLAVAKIA	(12)	7	58.33	5	41.67
DENMARK	(27)	8	29.63	19	70.37
@GREAT BRITAIN	(599)	198	33.06	401	66.94
FINLAND	(35)	7	20.00	28	80.00
@FRANCE	(297)	43	14.48	254	85.52
@FEDERAL REPUBLIC OF GERMANY	(267)	81	30.34	186	69.66
GERMAN DEMOCRATIC REPUBLIC	(20)	15	75.00	5	25.00
@GREECE	(424)	81	19.10	343	80.90
HUNGARY	(6)	4	66.67	2	33.33
ICELAND	(51)	3	5.88	48	94.12
IRELAND	(100)	18	18.00	82	82.00
ITALY	(124)	30	24.19	94	75.81
LUXEMBOURG	(2)	0	0.0	2	100.00
MALTA	(3)	3	100.00	0	0.0
NETHERLANDS	(85)	21	24.71	64	75.29
NORWAY	(47)	8	17.02	39	82.98
POLAND	(43)	18	41.86	25	58.14
PORTUGAL	(49)	15	30.61	34	69.39
ROMANIA	(10)	8	80.00	2	20.00
SPAIN	(127)	15	11.81	112	88.19
SWEDEN	(63)	16	25.40	47	74.60
SWITZERLAND	(55)	9	16.36	46	83.64
U. S. S. R.	(8)	8	100.00	0	0.0
YUGOSLAVIA	(41)	10	24.39	31	75.61
MIDEAST-TOTAL	(2316)	711	30.70	1605	69.30
BAHRAIN	(25)	0	0.0	25	100.00
@IRAN	(1119)	372	33.24	747	66.76
IRAQ	(92)	34	36.96	58	63.04
ISRAEL	(187)	50	26.74	137	73.26
JORDAN	(192)	52	27.08	140	72.92
KUWAIT	(66)	8	12.12	58	87.88
@LEBANON	(332)	105	31.63	227	68.37
OMAN	(3)	2	66.67	1	33.33
QATAR	(8)	1	12.50	7	87.50
@SAUDI ARABIA	(222)	73	32.88	149	67.12
SYRIA	(53)	13	24.53	40	75.47
UNITED ARAB EMIRATES	(14)	0	0.0	14	100.00
YEMEN	(3)	1	33.33	2	66.67
PACIFIC-TOTAL	(306)	74	24.18	232	75.82
AMERICAN SAMOA	(8)	3	37.50	5	62.50
@AUSTRALIA	(210)	45	21.43	165	78.57
CAROLINE ISLANDS	(3)	1	33.33	2	66.67
FIJI ISLANDS	(17)	3	17.65	14	82.35
MARIANA ISLANDS	(3)	2	66.67	1	33.33
NEW CALEDONIA	(3)	2	66.67	1	33.33
NEW ZEALAND	(55)	15	27.27	40	72.73
SOLOMON ISLANDS	(2)	1	50.00	1	50.00
TONGA	(5)	2	40.00	3	60.00
ALL NON-U. S. CITIZENS	(26455)	5131	19.40	21324	80.60

Section 2

Data on Selected Personal, Academic, and Testing-Related Variables for the U.S. and General Foreign Examinee Populations

Comparative profiles on selected variables are presented in this section for foreign examinees generally and for the 10 percent sample of U.S. examinees.

Personal Background Variables

Table 2 provides comparative data on sex, age, parental educational attainment, and reported English language communication status for U.S. and foreign examinees.*

- o Almost three-fourths of foreign examinees, as compared to less than one-half of the U.S. examinees, were males.
- o Somewhat more than 60 percent of all examinees (U.S. and foreign) were less than 27 years of age. However, foreign examinees were more homogeneous with respect to age: 63 percent were between 23 and 30 years of age as compared to only 46 percent of U.S. examinees.
- o Almost identical percentages of foreign and U.S. examinees (43 and 44 percent, respectively) reported that their fathers had earned at least a four-year college degree; however, with respect to their mothers' education, only one-third of foreign as compared to more than one-half of U.S. examinees reported a comparably high level of educational attainment.**
- o Some 77 percent of the foreign examinees reported better communication in English than in any other language (EPL status). However, for a substan-

*Percentages reported in this and other tables are based on Ns shown, which indicate the number of respondents to the various items.

** Due to differences in educational systems across countries, a strictly literal interpretation of responses to this item probably is not warranted. However it is assumed that lack of strict comparability does not preclude general comparisons such as those involved in this study. The response pattern to items on parental educational attainment appear to be consistent with expectation (see pertinent data in Table 5, Table 8, and Table 13, and related discussion; see also supplementary data in Appendix A, Exhibits A.9 and A.10, on GRE performance in relation to parental educational attainment. Trends were quite similar in both the U.S. and foreign examinee populations).

TABLE 2. SEX, AGE, FAMILY EDUCATION, AND LANGUAGE BACKGROUND:
U.S. CITIZENS VS. NON-U.S. CITIZENS, 1981-82

VARIABLE	U.S. CITIZENS		NON-U.S. CITIZENS	
	NO. OF EXAMINEES	%	NO. OF EXAMINEES	%
SEX				
*MALE	6619	43	19020	73
FEMALE	8850	57	7212	27
TOTAL	15469	100	26232	100
AGE				
BELOW 23	5185	33	5449	21
*23-26	4860	31	10726	41
*27-30	2245	15	5677	22
31+	3191	21	4211	16
TOTAL	15481	100	26063	100
FATHER'S EDUCATION				
*4-YR. COLLEGE OR MORE	6537	43	10817	44
LESS THAN 4-YR. COLLEGE	8522	57	13542	56
TOTAL	15059	100	24359	100
MOTHER'S EDUCATION				
MORE THAN HIGH SCHOOL	8457	56	8055	33
*HIGH SCHOOL OR LESS	6611	44	16187	67
TOTAL	15068	100	24242	100
BEST LANGUAGE				
ENGLISH	15012	98	9553	37
*OTHER	312	2	16300	63
TOTAL	15324	100	25853	100

"*" INDICATES THAT THE PERCENT OF EXAMINEES IN THIS SUBGROUP IS HIGHER AMONG NON-U. S, CITIZENS THAN AMONG U. S. CITIZENS.

tial number of these examinees, non-native patterns of English language acquisition and usage must be assumed.

Academic Variables

Differences between U.S. and foreign examinees with respect to selected academic variables may be see in Table 3.

- o Foreign examinees relatively more frequently than U.S. examinees indicated a Ph.D. degree-goal (45 percent vs 37 percent).

- o More than one-half (52 percent) of foreign examinees, but only 15 percent of U.S. examinees, intended to major in the physical sciences, including engineering, or mathematics; only 27 percent of the foreign examinees, as compared to 49 percent of U.S. examinees, were oriented to the social sciences. (For complete detail on the undergraduate as well as the graduate fields of examinees, see Appendix A, Exhibits A.4 and A.5).

- o Clear differences are evident with respect to educational level at time of testing: only 29 percent of foreign examinees as compared to 45 percent of U.S. examinees were enrolled undergraduates; proportionately more foreign examinees than U.S. examinees (16 percent vs 8 percent) held master's degrees but were not currently enrolled; and proportionately more foreign examinees were in the undefined "other" status category. The substantially smaller proportion of foreign examinees in the enrolled undergraduate category is consistent with the comparatively low proportion of foreign examinees in the age range 23 years or below (Table 2).

Testing-Related Variables

Data on selected test-taking and score-reporting patterns are shown in Table 4.

- o A substantial minority of foreign examinees (41 percent) took the GRE General Test at a U.S. testing center, as did 99 percent of U.S. examinees.

- o About 85 percent of foreign examinees and 87 percent of their U.S. counterparts were first-time test takers (had no previous experience with the GRE).

- o Proportionately more foreign examinees (26 percent) than U.S. examinees (13 percent) did not designate a graduate institution or department to receive their GRE score report. It is reasonable to assume that examinees who designate institutional recipients of their score reports are closer to the formal application stage of the overall admission process than those who do not. If so, proportionately fewer foreign examinees than U.S. examinees may be actively considering specific departments at the time of testing.

TABLE 3. CURRENT EDUCATIONAL STATUS, DEGREE GOAL, INTENDED GRADUATE FIELD, LOCATION OF UNDERGRADUATE INSTITUTION, AND U.S. RESIDENCY STATUS: U.S. CITIZENS VS. NON-U.S. CITIZENS, 1981-82

VARIABLE	U.S. CITIZENS		NON-U.S. CITIZENS	
	NO. OF EXAMINEES	%	NO. OF EXAMINEES	%
DEGREE GOAL				
*PH.D.	5666	37	11146	45
M.A./M.S.	9447	63	13802	55
TOTAL	15113	100	24948	100
INTENDED GRADUATE FIELD				
ARTS AND HUMANITIES	1781	14	1745	8
SOCIAL SCIENCES	6497	49	6061	27
BIOSCIENCES	2876	22	3222	14
*MATHEMATICS AND PHYSICAL SCIENCES	2007	15	11742	52
TOTAL	13161	100	22770	100
UNDERGRADUATE SCHOOL				
U.S. INSTITUTION	14951	96	7271	28
*NON-U.S. INSTITUTION	687	4	19134	72
TOTAL	15638	100	26405	100
EDUCATIONAL STATUS				
ENROLLED UNDERGRADUATE	6966	45	7169	29
NON-ENROLLED B.A./B.S.	4166	27	5600	23
*ENROLLED GRADUATE	2366	15	4598	19
*NON-ENROLLED M.A./M.S.	1200	8	3863	16
*OTHER STATUS	786	5	3537	14
TOTAL	15484	100	24767	100
RESIDENCY STATUS				
RESIDENT ALIEN	NOT APPLICABLE		5131	19
OTHER STATUS			21324	81
TOTAL			26455	100

"*" INDICATES THAT THE PERCENT OF EXAMINEES IN THIS SUBGROUP IS HIGHER AMONG NON-U. S. CITIZENS THAN AMONG U. S. CITIZENS.

TABLE 4. TEST TAKING AND SCORE REPORTING PATTERNS:
U.S. CITIZENS VS. NON-U.S. CITIZENS, 1981-82

VARIABLE	U.S. CITIZENS		NON-U.S. CITIZENS	
	NO. OF EXAMINEES	%	NO. OF EXAMINEES	%
TEST CENTER				
IN U.S.	15489	99	10899	41
*NOT IN U.S.	149	1	15449	59
TOTAL	15638	100	26348	100
EXPERIENCE WITH GRE				
FIRST TIME EXAMINEE	13650	87	22379	85
*REPEATER	1967	13	3937	15
TOTAL	15617	100	26316	100
SENT SCORE REPORT(S) TO DEPARTMENT				
YES	13603	87	14621	74 #
*NO	2034	13	5174	26
TOTAL	15637	100	19795	100
TOOK GRE SUBJECT TEST ##				
YES, ARTS AND HUMANITIES	386	22	317	21
*YES, SOCIAL SCIENCES	1225	19	1346	25
*YES, BIOLOGICAL SCIENCES	553	20	691	26
YES, MATH. OR PHYSICAL SCIENCE	760	39	2763	36
YES, SOME FIELD	3307	21	5586	21

"*" INDICATES THAT THE PERCENTAGE OF EXAMINEES IN THIS SUBGROUP IS HIGHER AMONG NON-U. S. CITIZENS THAN AMONG U. S. CITIZENS.

#CODING FOR SCORE REPORTING VS. NON-REPORTING WAS MISSING FOR A SUBSTANTIAL NUMBER OF EXAMINEES FROM TWO COUNTRIES (INDIA AND TAIWAN), THUS ACCOUNTING FOR THE REDUCED N FOR THIS ITEM. DATA WERE ESSENTIALLY COMPLETE FOR ALL OTHER COUNTRY CONTINGENTS. SEE TABLE 7 FOR COMPARABLE PERCENTAGES, BY COUNTRY, FOR 25 LEADING COUNTRY CONTINGENTS, INCLUDING INDIA AND TAIWAN.

##EXCEPT FOR THE "YES, SOME FIELD" CATEGORY, THESE ARE PERCENTAGES OF EXAMINEES, BY CITIZENSHIP, AND INTENDED GRADUATE FIELD WHO TOOK A GRE SUBJECT (ADVANCED) TEST. APPROXIMATELY 21 PERCENT OF ALL U. S. CITIZENS AND 21 PERCENT OF ALL NON-U. S. CITIZENS TOOK A SUBJECT TEST.

- Some 21 percent of all GRE General Test takers (foreign and U.S.) also took a GRE Subject (Advanced) Test. Foreign examinees oriented to social science or biological science fields were somewhat more likely than similarly oriented U.S. examinees to have taken a GRE Subject Test.

Section 3

Examinee Profiles for 25 Leading Countries

This section provides comparative data for foreign examinees in the 25 leading contingents and six world regions (including examinees from all countries in the respective regions, not simply the leading 25 for which detail is provided). These data point up the heterogeneity of the foreign examinee population--with respect to almost every variable, marked differences among the leading 25 contingents are discernible.

Personal Background Data by Country and World Region

Table 5 summarizes data on sex, age, parental educational attainment, and language background by country. In this and similar tables to follow, a "+" following a contingent's entry indicates a higher percentage (or other value) for the contingent than for all foreign examinees ("all non-U.S. citizens" in the table); an "*" indicates a higher percentage for the contingent than for U.S. examinees ("all U.S. examinees" in the table).

Sex

With one exception (the Philippines), the percentage of males was greater for each of the 25 leading foreign contingents than for U.S. examinees generally; by world region, the percentage of males was higher for the African, Mideastern, and Asian contigents than for the other foreign contingents. Representation of females was greatest among examinees from the Philippines (62 percent), Canada (48 percent), Australia and the Federal Republic of Germany or West Germany (41 percent each); at the other extreme, among examinees from Nigeria, India, Indonesia, Pakistan, Lebanon, and Saudi Arabia, less than 16 percent were female.

Age

There are rather substantial age differences among the leading examinee contingents--range of mean years from 24.1 (Lebanon) to 30.4 (Indonesia). There are also differences among contingents from different countries within the same world region with respect to the mean age of examinees.

Parental Educational Attainment

Approximately equal percentages of foreign (44 percent) and U.S. (43 percent) examinees came from families in which the father was a four-year college graduate. Since higher education enrollment rates for these countries are much lower than U.S. rates (Hudson & Taylor, 1972), it is reasonable to infer that these foreign examinees are more highly selected in terms of paternal educational level than are U.S. examinees, relative to their respective populations; only 33 percent of the foreign examinees as compared to 56

TABLE 5. SELECTED PERSONAL AND BACKGROUND CHARACTERISTICS OF EXAMINEES BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND COUNTRY	NO. OF EXAMINEES	SEX	AGE		FAMILY EDUCATION DATA		NATIVE (OR BEST) LANGUAGE		
		MALE	(IN YEARS) MEAN	(< 27) %	FATHER 4-YR. COLL. GRAD %	MOTHER BEYOND H. S. %	ENGLISH IS BEST LANGUAGE %	MOST PREVALENT LANGUAGE AND PER CENT OF CONTINGENT REPORTING IT# LANGUAGE	%
	N	%							
AFRICA-TOTAL	(2173)	82+*	28.6+*	38	30	24	52+	#	
NIGERIA	(883)	85+*	29.0+*	34	29	27	66+	ENGLISH	64
AMERICA-TOTAL	(4297)	61 *	27.1+*	59	41	41+	46+	#	
MEXICO	(631)	77+*	26.4	63	44 *	36+	8	SPANISH	89
CANADA	(1470)	52 *	26.3	68	39	47+	93+	ENGLISH	92
BRAZIL	(294)	71 *	27.8+*	49	51+*	44+	7	PORTUGUESE	89
COLOMBIA	(236)	67 *	26.4	57	48+*	33	10	SPANISH	88
VENEZUELA	(396)	63 *	29.5+*	38	39	30	5	SPANISH	92
ASIA-TOTAL	(14443)	74+*	26.1	64	49+*	32	36	#	
TAIWAN	(3791)	70 *	26.1	63	39	23	15	CHINESE	89
HONG KONG	(674)	72 *	24.4	82	20	19	15	CHINESE	82
INDIA	(4210)	84+*	24.5	79	68+*	43+	71+	UNLISTED	46
INDONESIA	(275)	86+*	30.4+*	43	22	17	12	INDONESIAN	82
JAPAN	(894)	68 *	27.6+*	49	54+*	40+	5	JAPANESE	88
KOREA	(1547)	79+*	27.7+*	44	52+*	29	10	KOREAN	87
MALAYSIA	(628)	71 *	27.3+*	5[illegible]	12	10	52+	ENGLISH	50
PAKISTAN	(266)	86+*	27.5+*	54	58+*	30	40+	URDU	45
PHILIPPINES	(467)	38	26.6+*	62	68+*	71+*	7[illegible]	ENGLISH	69
THAILAND	(770)	59 *	26.7+*	61	36	31	14	THAI	83
EUROPE-TOTAL	(2920)	68 *	25.5	74	48+*	40+	30	#	
TURKEY	(248)	[illegible]+*	24.6	79	58+*	33	9	TURKISH	87
GREAT BRITAIN	(599)	[illegible] *	25.6	72	47+*	43+	94+	ENGLISH	92
FRANCE	(297)	68 *	24.6	82	56+*	47+	5	FRENCH	91
FED. RP. GERMANY	(267)	59 *	26.3	72	50+*	45+	14	GERMAN	84
GREECE	(424)	78+*	24.3	87	39	26	6	GREEK	93
MIDEAST-TOTAL	(2316)	80+*	26.4	63	33	24	16	#	
IRAN	(1119)	77+*	25.3	71	40	26	17	FARSI	70
LEBANON	(332)	85+*	24.1	83	26	25	19	ARABIC	71
SAUDI ARABIA	(222)	96+*	29.4+*	3[illegible]	20	12	12	ARABIC	85
PACIFIC-TOTAL	(306)	63 *	27.8+*	59	37	37+	91+	#	
AUSTRALIA	(210)	59 *	28.6+*	56	39	34+	95+	ENGLISH	95
ALL NON-U. S.	(26455)	73 *	26.4	62	44 *	33	37	#	
U. S. CITIZENS	(15630)	43	26.7	65	43	56	98	ENGLISH	96

NOTE: "+" INDICATES HIGHER THAN "ALL NON-U.S."; "*" INDICATES HIGHER THAN U. S. CITIZENS.
#NOT DETERMINED FOR THE REGIONAL AND ALL NON-U. S. CITIZENS.

percent of U.S. examinees reported that their mother's education extended beyond high school. Examinees from the Americas, Europe, and the Pacific region (primarily Australia and New Zealand) reported higher than average levels of mother's education and examinees from Asia and Europe reported higher than average levels of father's education, but there were marked differences among countries within regions on both these variables.

There is a relatively strong inverse relationship across countries between the percentage of more highly educated mothers and the percentage of males in the respective contingents--contingents with higher percentages of males had lower percentages reporting more highly educated mothers and vice versa (see Figure 3.1).

Language Background*

Some 37 percent of all foreign examinees reported EPL status (better communication in English than in any other language). Among the 25 leading contingents, the percentage so reporting ranged from 5 to 95; more than 90 percent of examinees from Australia, Canada, and Great Britain reported EPL status, as did 71 percent of Indian, 70 percent of Philippine, 66 percent of Nigerian, 52 percent of Malaysian, and 40 percent of Pakistani examinees. For the remaining contingents, percentages reporting EPL status were much lower, ranging between 5 and 19 percent. See Appendix B, Exhibits B.1 and B.2 for detailed data on languages reported for all countries.

For the majority of EPL examinees from the various non-native English speaking countries, it is assumed (a) that the reported EPL status reflects non-native patterns of English language acquisition and usage, and (b) that these EPL examinees typically are not natively fluent in English although they may currently communicate better in English than in their native language. There is evidence suggesting that foreign examinees who report that they communicate better in English than in any other language tend to be more proficient in English than their counterparts who report otherwise (Wilson 1982c). They earn higher scores on the Test of English as a Foreign Language or TOEFL (ETS 1981), a test that is taken by non-native speakers to demonstrate their level of proficiency in English, and they also earn higher GRE verbal and GMAT verbal scores. (See Table 8 for data on GRE performance by reported EPL vs ESL status; see also Table 11 and related discussion regarding the effect of language background on verbal test performance).

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* Although instructions indicated that examinees who reported EPL status in response to BQ-E.1 need not specify "native or best language" (BQ-E.2), a majority of them did so. In Table 5, the percentage designating English as the "native or best language" is slightly smaller than the percentage reporting EPL status in most instances, and substantially smaller in the case of examinees from India. Some of the discrepancy between the percentages may reasonably be attributed to variations in patterns of adherence to instructions. However, some of the discrepency may also be due to the fact that an individual whose native language was not English may currently communicate better in English than in the historically relevant native language.

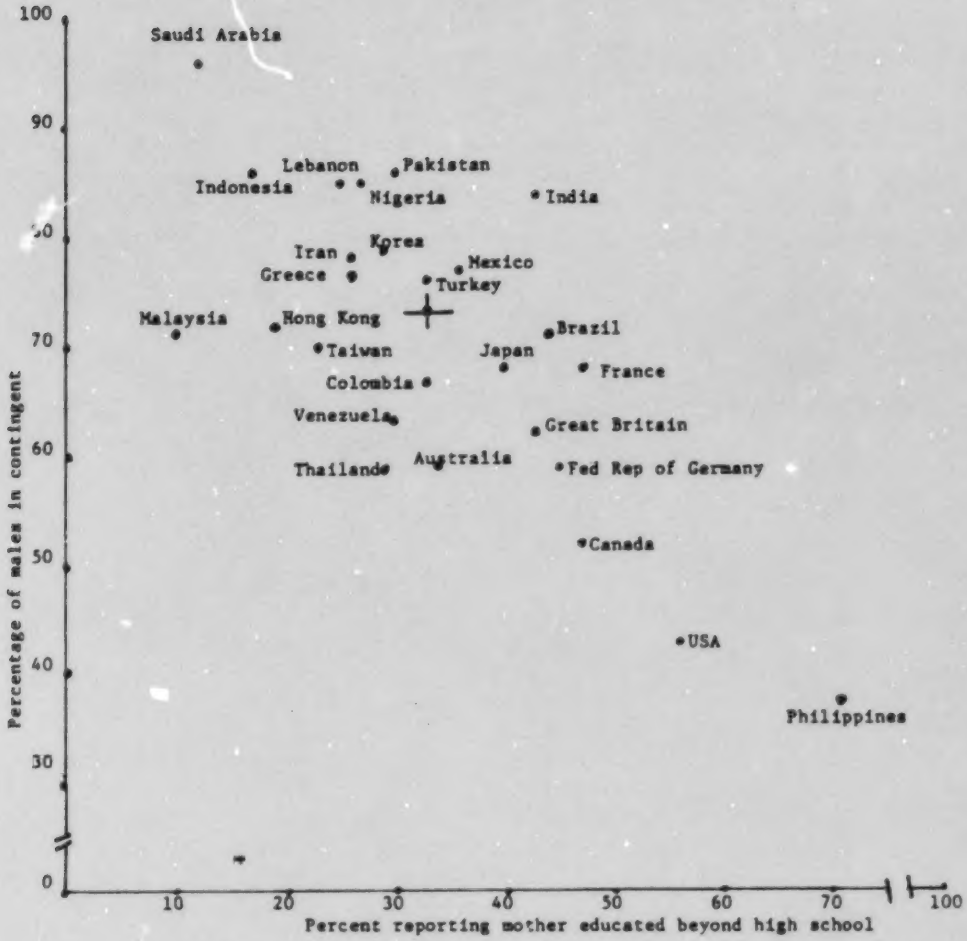

Figure 3.1. Relationship between typical level of mother's educational attainment and percentage of males, for examinee contingents from 26 countries

Most examinee contingents were linguistically homogeneous--that is a single language accounted for a very substantial majority of all examinees.

Academic Characteristics of Examinees by Country and World Region

Table 6 summarizes, for each leading contingent, data on current educational level, degree goal, intended graduate field (broad areas), and undergraduate institution (U.S. vs other). Data on U.S. citizenship status (percentage reporting resident alien status) are included for perspective.

Educational Level

Foreign examinees generally differed considerably from U.S. examinees in educational level: proportionately fewer were enrolled undergraduates (19 percent as opposed to 45 percent) and proportionately more were either nonenrolled master's degree holders (16 percent vs 8 percent) or in some status not otherwise classified (13 percent vs 5 percent).

In Table 6 the distribution of foreign examinees, by country, with respect to the four specific educational level categories is shown. Percentages in the indeterminate, other status category are not shown, but contingents with higher percentages in this category are indicated by special notation).

Twenty-three of the 25 leading contingents included a higher percentage of nonenrolled master's degree holders than the U.S. contingent, but only five of the 25 included as high a percentage of enrolled undergraduates.

Highest Degree Goal

Proportionately more foreign than U.S. examinees (45 percent vs 37 percent) reported a doctorate-degree goal. Among the foreign contingents, those with the highest percentages of doctorate-oriented examinees were Korea (77 percent) and Canada, Australia, West Germany, Greece, and India (all 49 percent or more). Contingents with the lowest percentages of Ph.D. aspirants were those from Venezuela (18 percent) and Indonesia, France, Lebanon, Colombia, and Thailand (all with less than one-third). By world region, examinees from Asia, Europe, and the Pacific (principally Australia and New Zealand) were more doctorate-oriented than examinees from Africa, the Americas, and the Mideast.

Intended Graduate Field

Only 15 percent of U.S. examinees intended to major in physical science fields, including mathematics; in 24 of the 25 leading foreign contingents (all but the Canadian contingent), examinees were concentrated more heavily in the physical sciences than were U.S. examinees. However, there was considerable variation among the contingents in this regard: some 62 percent of Asian and 59 percent of Mideastern examinees were in the physical sciences whereas this was true for only 28 percent of those from the Pacific, 29 percent from the Americas, 34 percent from Africa, and 45 percent from Europe.

TABLE 6. CURRENT EDUCATIONAL STATUS, DEGREE GOAL, INTENDED FIELD, U. S. RESIDENCY STATUS, AND U. S. UNDERGRADUATE ATTENDANCE, BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND COUNTRY	NO. OF EXAMINEES	CURRENT EDUCATIONAL STATUS				GOAL	INTENDED GRADUATE FIELD				RESIDENCY STATUS	UNDERGRADUATE SCHOOL
		ENR. U.G.	NON-ENR. U.G.	ENR. GRAD	NON-ENR. MA/HS	PH.D.	ARTS + HUM.	SOC. SCI.	BIO. SCI.	PHYS. SCI.	RESIDENT ALIEN	U.S.
		%	%	%	%	%	%	%	%	%	%	%
AFRICA-TOTAL	(2173)	27	22	23+*	18+*	43 *	6	35+	24+*	34 *	28+	48+
NIGERIA	(883)	35+	20	24+*	14 *	42 *	7	41+	24+*	28 *	34+	66+
AMERICA-TOTAL	(4297)	34+	22	18 *	17+*	40 *	10+	41+	20+	29 *	27+	33+
MEXICO	(631)	20	24+	21+*	26+*	33	5	35+	19+	41 *	20+	23
CANADA	(1470)	49+*	21	13	9 *	54+*	15+*	51+*	20+	15	22+	23
BRAZIL	(294)	16	18	23+*	30+*	44 *	9+	28+	10	52 *	17	20
COLOMBIA	(236)	25	28+*	18	25+*	30	5	36+	19+	40 *	29+	38+
VENEZUELA	(396)	18	15	25+*	34+*	18	5	31+	23+	41 *	15	34+
ASIA-TOTAL	(14443)	25	25+	17 *	16 *	47+*	6	20	12	62+*	13	17
TAIWAN	(3791)	22	39+*	17 *	12 *	44 *	6	14	11	70+*	8	8
HONG KONG	(674)	62+*	18	11	4	38 *	10+	21	7	62+*	24+	60+
INDIA	(4210)	23	18	13	16 *	49+*	3	9	12	76+*	9	8
INDONESIA	(275)	28	18	24+	20+*	24	6	29+	12	53+*	19	39+
JAPAN	(894)	24	28+*	18 *	13 *	32	20+*	39+	8	33 *	16	24
KOREA	(1547)	16	26+	27+*	21+*	77+*	9+	30+	11	50 *	20+	11
MALAYSIA	(628)	40+	14	7	20+*	34	4	36+	18+	42 *	11	36+
PAKISTAN	(264)	28	16	15	24+*	39 *	2	19	11	67+*	17	31+
PHILIPPINES	(467)	14	40+*	21+*	17+*	36	8	38+	21+	34 *	19	17
THAILAND	(778)	17	11	20+*	31+*	32	6	40+	15+	39 *	11	17
EUROPE-TOTAL	(2920)	34+	18	18 *	12 *	46+	13+	30+	12	45 *	24+	30+
TURKEY	(248)	46+*	12	18 *	12 *	44 *	5	16	6	74+*	14	18
GREAT BRITAIN	(599)	36+	29+*	11	12 *	49+	17+*	37+	15+	31 *	33+	31+
FRANCE	(297)	19	9	21+*	17+*	24	15+*	19	10	56+*	14	20
FED. RP. GERMANY	(267)	23	13	25+*	9 *	56+*	23+*	34+	11	32 *	30+	50+
GREECE	(424)	53+*	12	16 *	10 *	50+*	5	22	8	65+*	19	31+
MIDEAST TOTAL	(2316)	41	13	26+*	12 *	39 *	5	23	13	59+*	31+	62+
IRAN	(1119)	50+*	11	25+*	9 *	40 *	5	19	10	66+*	33+	80+
LEBANON	(332)	56+*	12	19 *	7	24	3	16	7	73+*	32+	67+
SAUDI ARABIA	(222)	21	14	43+*	15 *	38	6	36+	15+	43 *	33+	36+
PACIFIC TOTAL	(306)	23	22	21+*	16 *	56+*	13+	40+	19+	28 *	24+	25
AUSTRALIA	(210)	21	23	21+*	15 *	57+*	14+	39+	20+	27 *	21+	23
ALL NON-U. S.	(26455)	29	23	19 *	16 *	45 *	8	27	14	52 *	19	28
U. S. CITIZENS	(15638)	45	27	15	8	37	14	49	22	15	NOT APPLICABLE	96

NOTE: "+" INDICATES HIGHER THAN "ALL NON-U. S."; "*" INDICATES HIGHER THAN U. S. CITIZENS.

The general configuration of examinee contingents according to physical science vs social science orientation is indicated in Figure 3.2, which shows the joint physical science and social science percentages for the countries involved. The physical and social sciences jointly account for 79 percent of the intended field choices of foreign examinees, and consequently there is a very strong inverse relationship between percentage in physical sciences and percentage in social sciences. Contingents that are least physical-science-oriented tend to have not only relative strong social-science orientation but also some spread of examinees into both biological science and arts and humanities fields (for example, exainees from Canada, Australia, Great Britain and West Germany and from the Pacific, and the Americas, generally.

Decreased physical science emphasis appears to be replaced by emphasis on the biological sciences but not on arts and humanities for several contingents (for example, the Philippines, Thailand, Colombia, Malaysia, Mexico, Saudi Arabia, and Venezuela).

Incidentally, it may be seen in Figure 3.2 that the contingents with the greatest relative emphasis on social sciences, arts and humanities, or biological sciences, as compared to the physical sciences, tended to include above average percentages of women.

Resident Alien vs Other Citizenship Status and U.S. vs Other Undergraduate Origin

The last two columns of Table 6 provide data on the percentage of examinees reporting resident alien status and the percentage reporting a U.S. undergraduate school. As indicated in Figure 3.3, there is a definite tendency for these two variables to be positively related: Contingents with higher percentages of resident aliens tend to include higher percentages of U.S-educated undergraduates. There is a marked variation among examinee contingents with respect to both these variables. Higher percentages of both resident aliens and U.S. undergraduate attendees are evident for examinee contingents from Mideastern and African countries, generally, and the lowest representation of such examinees is found among the Asian contingents.

Testing-Related Examinee Characteristics by Country and World Region

Table 7 summarizes data on location of test center (U.S. vs other), the incidence of first-time test takers (vs examinees who were repeating the GRE General Test), taking or not taking a GRE Subject Test, and the percentage of examinees who designated institutions or departments to receive their score reports.

Location of Test Center

A substantial minority (41 percent) of all foreign examinees were tested in a U.S. testing center. However, fully 81 percent of those from the Mideast and two-thirds of all African examinees (80 percent of the large Nigerian con-

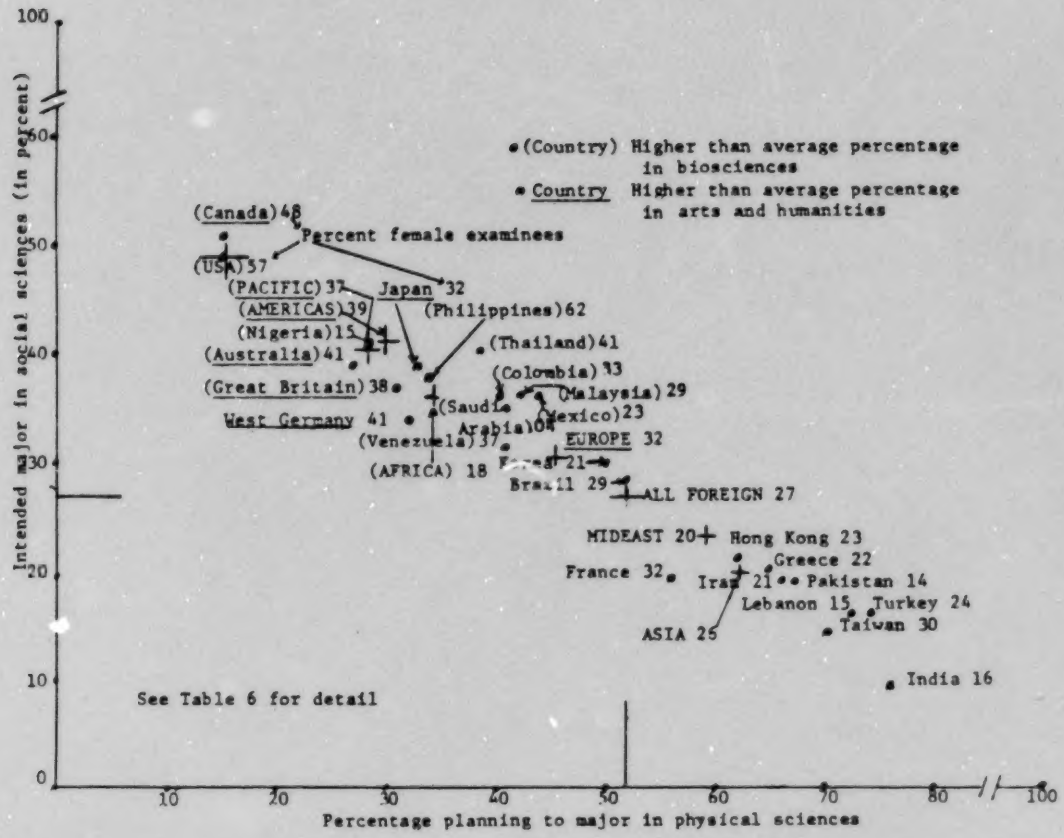

Figure 3.2. Configuration of examinee contingents according to physical science vs social science orientation and percent female

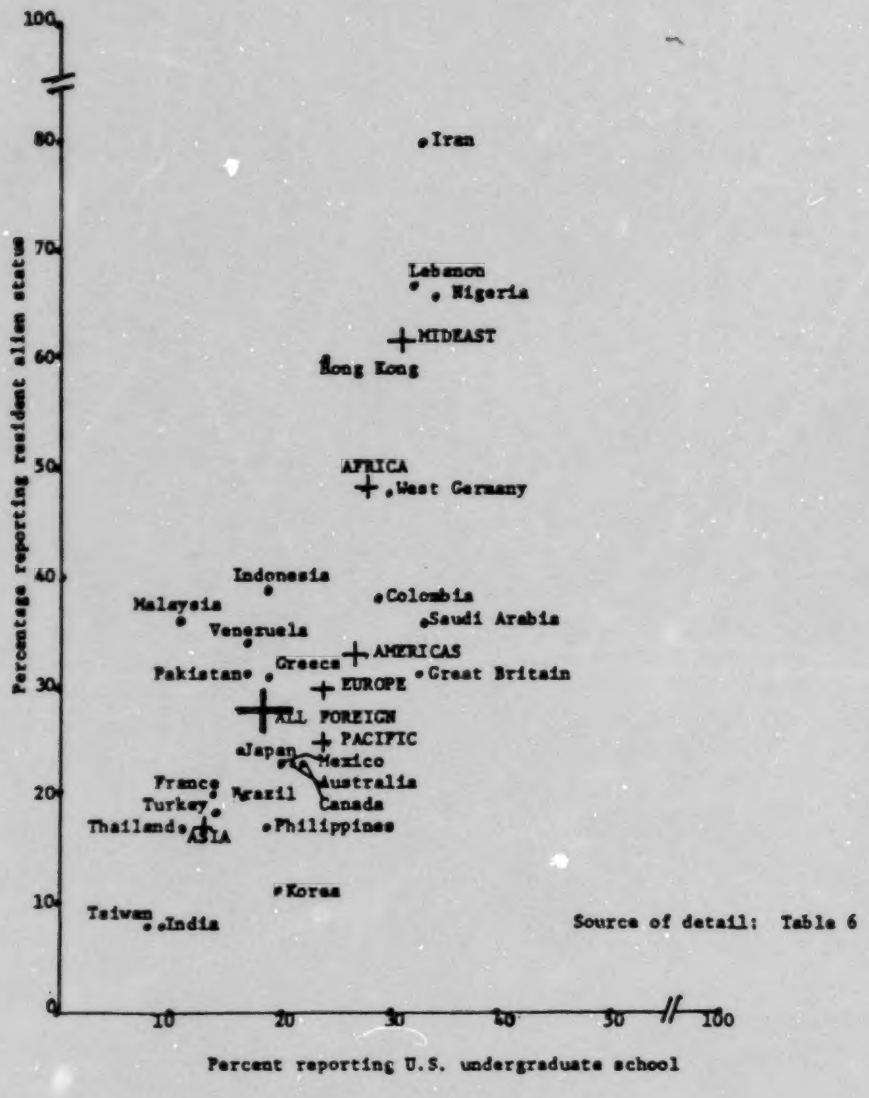

Figure 3.3. Relationship between the percentage of examinees reporting resident alien status and the percentage reporting a U.S. undergraduate school

TABLE 7. TEST-TAKING PATTERNS OF EXAMINEES BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND COUNTRY	NO. OF EXAMINEES	TESTED IN U.S. CENTER %	FIRST-TIME EXAMINEE %	TOOK GRE SUBJECT TEST## %	SCORE REPORTING PATTERN: REPORTED SCORES %	SCORE REPORTING PATTERN: NO. DEPARTMENTS DESIGNATED MEAN	S. D.
AFRICA-TOTAL	(2173)	66+	82	17	79	2.1 *	0.9
NIGERIA	(883)	80+	79	14	81+	2.3 *	0.9
AMERICA-TOTAL	(4297)	52+	87+	32	83+	2.1 *	0.9
MEXICO	(631)	57+	84	22	77+	2.1 *	0.9
CANADA	(1470)	31	91+	44+*	86+	2.1 *	0.9
BRAZIL	(294)	36	89+*	30+*	81+	2.2 *	0.9
COLOMBIA	(236)	67+	85	40+*	85+	2.0	0.9
VENEZUELA	(396)	80+	82	17	70	1.9	0.9
ASIA-TOTAL	(14443)	28	85	27 *	67	2.3+*	0.9
TAIWAN	(3791)	20	84	11	63 *	2.2 *	0.9
HONG KONG	(674)	62+	76+	36+*	67	2.4 +*	0.9
INDIA	(4210)	14	89+*	51+*	78+*	2.2 *	0.9
INDONESIA	(275)	58+	80	26 *	64	2.0	0.9
JAPAN	(894)	37	77	38+*	67	2.2 *	0.9
KOREA	(1547)	30	79	20	55	2.5+*	0.8
MALAYSIA	(628)	38	90+*	21	72	2.5+*	0.8
PAKISTAN	(266)	54+	82	19	71	2.3+*	0.9
PHILIPPINES	(467)	31	92+*	25 *	81+	2.2 *	0.9
THAILAND	(778)	42+	77	15	63	2.2 *	0.9
EUROPE-TOTAL	(2920)	41	91+*	41+*	80+	2.2 *	0.9
TURKEY	(248)	46+	79	42+*	69	2.5+*	0.8
GREAT BRITAIN	(599)	44+	92+*	34+*	85+	2.1	0.9
FRANCE	(297)	26	94+*	47+*	78+	2.3 *	0.9
FED. RP. GERMANY	(267)	51+	94+*	39+*	78+	1.9	0.9
GREECE	(424)	38	86+	46+*	68	2.5+*	0.8
MIDEAST-TOTAL	(2316)	81+	77	20	65	2.1 *	0.9
IRAN	(1119)	96+	75	20	69	2.0	0.9
LEBANON	(332)	75+	83	19	70	2.2 *	0.9
SAUDI ARABIA	(222)	78+	69	17	46	2.1 *	0.9
PACIFIC-TOTAL	(306)	38	93+*	25 *	85+	2.1 *	0.9
AUSTRALIA	(210)	32	97+*	26 *	87+	2.1 *	0.9
ALL NON-U. S.	(26455)	41	85	28 *	74	2.2 *	0.9
U. S. CITIZENS	(15638)	99	87	22	87	2.0	0.9

NOTE: "+" INDICATES HIGHER THAN "ALL NON-U. S."; "*" INDICATES HIGHER THAN "U. S. CITIZENS".
#PERCENTAGES BASED ON SUBSTANTIALLY REDUCED N. SEE NOTE FROM TABLE 4.
##PERCENTAGES BASED ON THOSE RESPONDING "YES, SOME FIELD" + "NO, SOME FIELD", INSTEAD OF "ALL TEST TAKERS" AS IN TABLE 4.

tingent) were in the U.S. when tested; only slightly more than one-fourth of the Asian examinees generally (28 percent), but substantially higher percentages of examinees from certain Asian countries were examined in the U.S. (Hong Kong, 62 percent; Indonesia, 58 percent; and Pakistan, 54 percent). Other countries with higher than average percentages tested at U.S. centers were: Venezuela (80 percent), Colombia (67 percent), Mexico (57 percent), West Germany (51 percent), Turkey (46 percent), and Great Britain (44 percent).

As might be expected, contingents with higher percentages of examinees tested at U.S. centers tended to be those with higher percentages of examinees reporting U.S. undergraduate origins.

Repeated Test Taking

Some 13 percent of U.S. and 15 percent of foreign examinees were classifiable as "repeaters"--examinees who had taken one or more GRE tests before. However, from Table 7 it is clear that repeaters accounted for 20 percent or more of several contingents and less than 10 percent in others. Highest incidence of repeaters was found among Mideastern examinees (23 percent) and lowest incidence was found among European examinees (9 percent) and Pacific examinees (7 percent). Among specific country contingents, test repetition was highest for Saudi Arabian (31 percent) and Iranian examinees (25 percent), several Asian contingents (Japan, Thailand, Korea, and Indonesia, with 20-23 percent), and Nigeria (21 percent). As will be seen later, contingents with higher incidence of repeaters tend to be those with very low mean scores on the GRE verbal measure--due it may reasonably be inferred to factors associated with their less than native levels of fluency in English.

Score Reporting to Institutions and Departments

Table 7 shows that foreign examinees generally were less inclined to forward score reports (only 74 percent did so) than their U.S. counterparts (87 percent). In only one instance (Australia) was incidence of score reporting equal to that for U.S. examinees; at the other extreme, only 46 percent of Saudi Arabian examinees designated a school or department; only 65 percent of all Mideastern examinees and 67 percent of Asian examinees reported scores as compared to 85 percent of those from the Pacific region, 80 percent of European examinees, and 79 percent of those from Africa.

Although proportionately fewer foreign examinees than U.S. examinees reported scores, those who did do so designated a slightly higher average number of institutions--mean of 2.2 score reports for foreign and 2.0 for U.S. examinees. Moreover, this was true for 19 of the 25 leading contingents.

Link between Test Taking and Score Reporting

Figure 3.4 shows the substantial positive covariation, across the 25 leading examinee contingents, between percentage of nonrepeaters (first time test takers) and percentage reporting scores. As will be seen later (see Figures

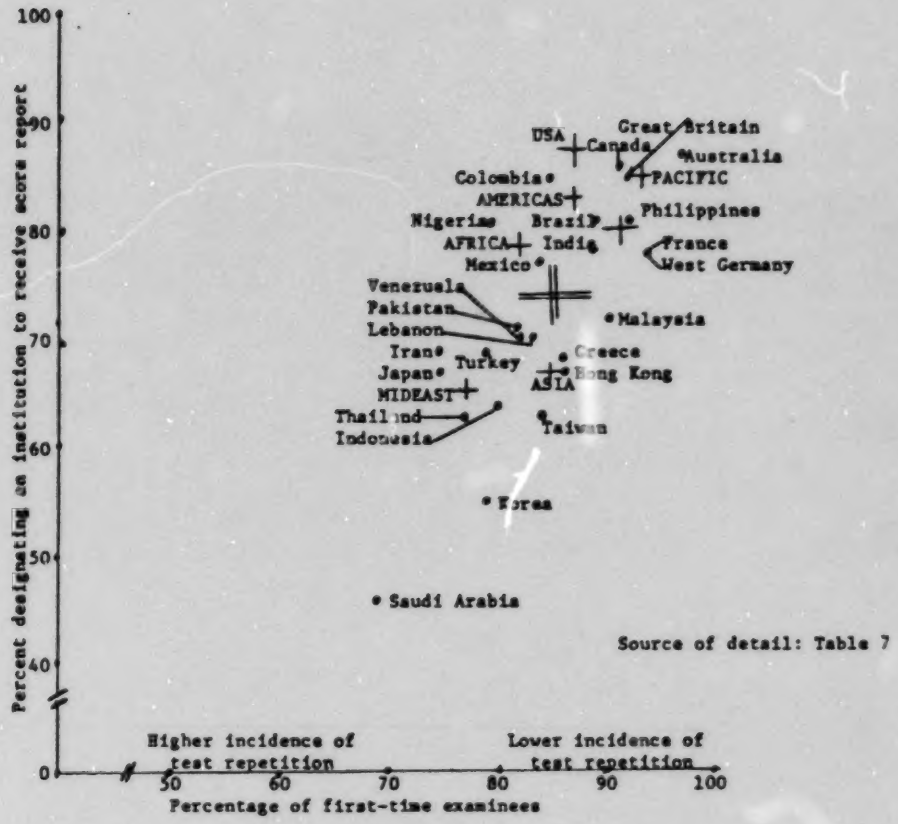

Figure 3.4. Covariation between incidence of first-time examinees (nonrepeaters) and incidence of score-reporting to institutions

6.3 and 6.4 and related discussion), differences among the leading contingents in these test taking and score reporting patterns are associated with differences among them in levels of performance on the GRE, especially the GRE verbal measure. Both the tendency to repeat the GRE and the tendency not to report scores to institutions may reasonably be attributed to dissatisfaction with first-time test performance--and a belief that some improvement will be shown on retesting.

Examinees Taking a GRE Subject Test*

The percentage of examinees who took a GRE Subject Test as well as the GRE General Test varied markedly across countries. Highest percentages of Subject Test takers were found among European examinees and the lowest percentages were found among those from African and Mideastern countries.

*In calculating percentages taking a Subject Test, the base used in Table 7 (examinees with complete data on graduate field and test codes) differed from that used for Table 4 (all examinees). This difference does not affect interpretation of the data by country in Table 7, but accounts for the discrepancy between the percentages reported for the foreign and U.S. examinee populations in the two tables.

Section 4

GRE Scores in Relation to Selected Examinee Characteristics: Parallel Analyses for U.S. and Foreign Examinees

Means and standard deviations of scores on the GRE General Test for the 10 percent sample of U.S. examinees (N = 15,638) and the foreign examinees (N = 26,455) were as follows:

	GRE Verbal		GRE Quant		GRE Analytical	
	Mean	SD	Mean	SD	Mean	SD
U.S. examinees	498	115	521	132	520	124
Foreign examinees	375	119	589	136	443	116

The mean scores of foreign examinees on the GRE verbal and analytical measures are substantially lower than those of U.S. examinees, but the mean quantitative score was higher (by more than 0.5 U.S. examinee standard deviation units). Depressed verbal performance relative to quantitative performance has been consistently reported (for example, Wilson 1982c; Sharon 1972; Harvey & Pitcher, 1963; Harvey & Lannholm, 1961)*

In evaluating the low average verbal (and analytical) performance of foreign examinees it should be kept in mind that 63 percent of them reported better communication in a language other than English (were ESL examinees who were less than natively fluent in English). Their higher performance on the quantitative measure reflects their heavy concentration in primarily quantitative fields of study. In a study of the relationship between EPL vs ESL status and GRE performance involving examinees tested during 1977-78 (Wilson, 1982c), it was found that foreign EPL examinees in given major fields had higher verbal means than their ESL counterparts, but there were no noticeable differences in GRE quantitative score means either for foreign EPL and ESL examinees or for U.S. examinees and foreign examinees regardless of EPL vs ESL status. Similar trends were found in data for the current study, as will be seen later.

In this section, for the general foreign examinee and U.S. examinee populations, respectively, GRE score means and standard deviations are reported

*In their study of foreign nationals enrolled in several U.S. graduate schools, Harvey & Lannholm (1961) reported as follows: "On verbal ability, the foreign students obtained a mean score of 372.8, which was more than one standard deviation below the mean of 492 for the Basic Reference Group. On quantitative ability, the foreign students had a mean score of 531.2 compared to 480 for the Basic Reference Group. The former mean is approximately one-half of a standard deviation above the latter" (p. 4). Although the size and composition of the foreign student population have changed considerably over the past two decades, the relative standing of foreign and U.S. examinees on the verbal and quantitative measures appears to have been relatively constant.

for subgroups defined in terms of status on the personal, academic, and testing related variables described in the preceding sections.

Personal Background Variables vs GRE Performance

Data on GRE performance by sex, age, level of parental education, and reported English language communication status (EPL vs ESL) are presented in Table 8.

Sex

Among U.S. examinees, males had higher average scores than females on all three GRE measures, especially the quantitative measure; among foreign examinees, males had higher quantitative means, but females had higher verbal means and slightly higher mean analytical scores than males. These comparisons, however, do not take into account important sex differences in the distribution of examinees according to major field. Supplementary data on sex and GRE performance, by graduate major areas, shown in Appendix A (Exhibits A.6, A.7, and A.8), indicate that among U.S. examinees males had higher quantitative means in each of 11 graduate major areas and for foreign examinees this was true in 9 of the 11 areas. However, as indicated in Figure 4.1, no such systematic sex differences in verbal performance are present for U.S. examinees. In several areas, females had higher verbal means than males, for example.

Age

On both the quantitative and analytical measures, in both populations, younger examinees performed better than older ones; mean scores decreased regularly with increase in age across the four age categories used. Differences between the youngest and the oldest age groups on the quantitative (and analytical) measures were sharper for foreign examinees than for U.S. examinees.

Parental Educational Attainment

In both populations, higher levels of parental educational attainment were associated with higher performance on the verbal, quantitative, and analytical measures (see Exhibits A.9 and A.10, Appendix A, for greater detail).

EPL vs ESL Status

When the U.S. and foreign examinees are classified according to this relative English proficiency variable, population differences in mean verbal score (122 points) are reduced but not eliminated. When the comparison is between EPL subgroups only, the difference is reduced to 64 points; for the ESL subgroup comparison, the difference becomes 66 points. Additional evidence regarding the relationship of the EPL vs ESL variable to GRE performance will be introduced in the analysis of GRE score differences by graduate major areas.

TABLE 8. GENERAL TEST SCORE DATA BY SEX, AGE, FAMILY EDUCATION AND ENGLISH BACKGROUND FOR U.S. CITIZENS AND NON-U.S. CITIZENS, 1981-82

SUBGROUPING VARIABLE	U.S. CITIZENS							NON-U.S. CITIZENS						
		GRE-V		GRE-Q		GRE-A			GRE-V		GRE-Q		GRE-A	
	N	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	N	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
SEX														
MALE	(6619)	505	113	564	130	528	125	(19020)	371	116	610	131	443	116
FEMALE	(8850)	493	116	489	124	515	123	(7212)	387	126	537	136	446	114
TOTAL	(15469)	498	115	521	132	520	124	(26232)	375	119	590	136	443	116
AGE														
BELOW 23	(5185)	499	109	555	128	557	122	(5449)	427	130	634	121	507	116
23-26	(4060)	487	112	522	128	520	119	(10726)	369	113	601	125	449	109
27-30	(2245)	504	117	509	129	500	118	(5677)	350	106	576	140	416	105
31+	(3191)	509	125	476	130	492	118	(4211)	361	119	524	146	386	102
TOTAL	(15461)	498	115	522	132	521	124	(26063)	376	119	590	136	444	115
FATHER'S EDUCATION														
4-YR. COLLEGE OR MORE	(6537)	523	111	553	124	551	120	(10817)	396	126	604	131	462	118
LESS THAN 4-YR. COLLEGE	(8522)	479	114	498	132	498	121	(13542)	360	111	577	139	429	111
TOTAL	(15059)	498	115	522	131	521	124	(24359)	376	119	589	136	443	115
MOTHER'S EDUCATION														
MORE THAN HIGH SCHOOL	(8457)	515	113	538	127	540	122	(8055)	411	131	596	133	472	120
HIGH SCHOOL OR LESS	(6611)	476	113	501	134	497	122	(16187)	358	109	585	138	429	110
TOTAL	(15068)	498	115	522	131	521	124	(24242)	376	119	589	136	443	115
BEST LANGUAGE														
ENGLISH	(15012)	500	114	523	131	523	123	(9553)	436	136	570	139	462	127
OTHER	(312)	406	122	469	143	429	114	(16300)	340	92	600	133	433	107
TOTAL	(15324)	498	115	522	132	521	124	(25053)	376	120	589	136	444	116

NOTE: UNDERSCORING INDICATES A SUBGROUP VALUE HIGHER THAN THAT FOR THE TOTAL GROUP

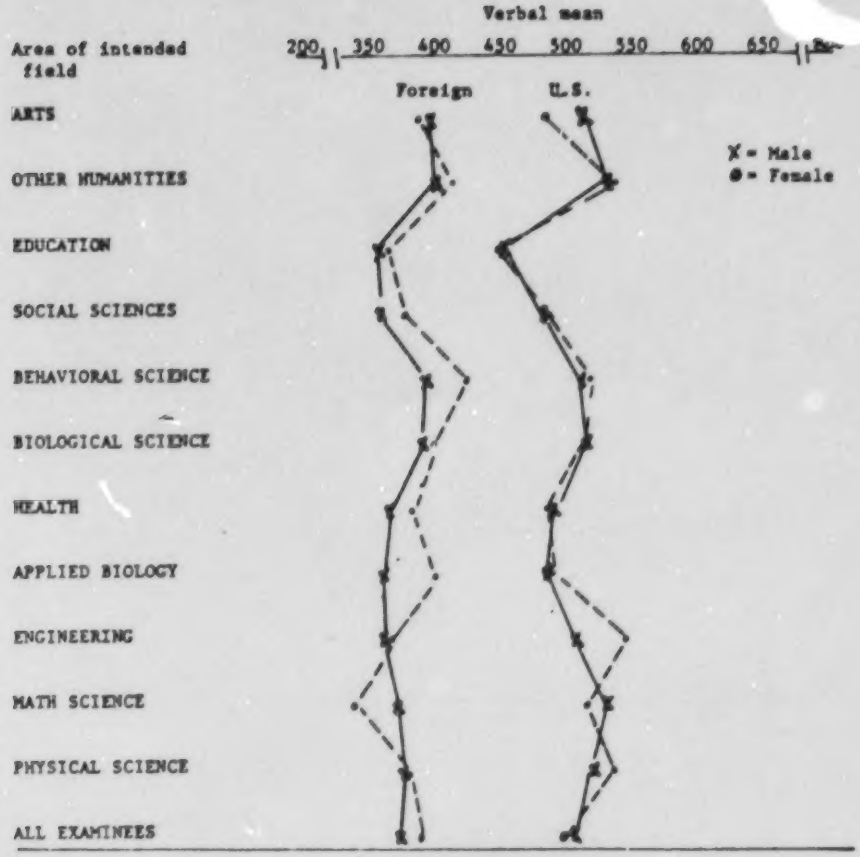

Figure 4.1. GRE verbal means by area of intended graduate study, by sex, for U.S. and foreign examinees

Source of data: Appendix A, Exhibit A.6

Academic Variables vs GRE Performance

Table 9 provides test score data by current educational level, degree goal, intended graduate field, U.S. vs other undergraduate institution, and resident alien vs other non-U.S. status.

Educational Level

In both populations, differences in GRE scores by reported educational level appear to be reasonably consistent with the previously reported differences in scores by age--that is, examinees taking the test as enrolled undergraduates or nonenrolled bachelor's degree holders, by inference probably younger than those in the other statuses, tended to have higher quantitative (and analytical) means. Among foreign examinees, enrolled undergraduates had the highest verbal means as well.

Degree Goal

In both examinee populations, doctoral aspirants had higher verbal, quantitative, and analytical means than examinees indicating master's degree goals.

Intended Graduate Field

Trends in GRE performance by major field are reflected graphically in Figure 4.2, which shows profiles of GRE General Test score means for U.S. and foreign examinees classified by four broad graduate major areas. Note that the profiles of GRE quantitative means for foreign and U.S. examinees are generally quite similar with respect to both level and pattern. The lower verbal and analytical means of foreign examinees, regardless of area, are clearly evident.

Figure 4.3 provides a more detailed picture of GRE performance by graduate major areas, using supplementary data from Appendix A (Exhibits A.6, A.7, and A.8). The quantitative score profiles of the respective populations are strikingly similar with respect to both level and pattern, but the verbal and analytical score profiles of foreign examinees are consistently at a much lower level, though generally similar in pattern to the U.S. examinee profiles.

Graduate Field and EPL vs ESL Status

Comparison of GRE score profiles for foreign examinees and the general GRE population (including both foreign and U.S. examinees) with control over both EPL vs ESL status and graduate major areas is provided in Figure 4.4, which is based on data from a study of GRE examinees tested during the 1977-78 testing year (Wilson 1982c). The quantitative score profiles of foreign EPL examinees and foreign ESL examinees were very similar and they conformed closely to the profile for all GRE examinees. Performance on the verbal and

TABLE 9. GRE GENERAL TEST SCORE DATA BY CURRENT EDUCATIONAL STATUS, DEGREE GOAL INTENDED GRADUATE FIELD, LOCATION OF UNDERGRADUATE SCHOOL, AND RESIDENCY STATUS, FOR U.S. CITIZENS AND NON-U.S. CITIZENS: 1981-82

SUBGROUPING VARIABLE	U.S. CITIZENS						NON-U.S. CITIZENS					
		GRE-V		GRE-Q		GRE-A		GRE-V		GRE-Q		GRE-A	
	N	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	N	MEAN	S.D.	MEAN	S.D.	
EDUCATIONAL STATUS													
ENROLLED UNDERGRADUATE	(6966)	497	112	543	132	542	124	(7169)	394	127	598	137	474	121
NON-ENROLLED B.A./B.S.	(4166)	514	113	527	124	526	117	(5600)	370	118	602	130	443	110
ENROLLED GRADUATE	(2366)	462	115	471	130	473	119	(4593)	360	114	569	144	424	115
NON-ENROLLED M.A./M.S.	(1200)	515	121	496	128	493	119	(3063)	358	108	566	141	413	106
OTHER STATUS	(706)	508	120	499	133	492	120	(3537)	385	118	595	129	440	113
TOTAL	(15484)	498	115	522	132	521	124	(24767)	376	119	588	137	443	116
DEGREE GOAL														
PH.D.	(5666)	530	113	549	128	543	124	(11146)	399	124	609	133	460	118
M.A./M.S.	(9447)	479	111	504	131	507	121	(13302)	359	112	571	137	430	112
TOTAL	(15113)	493	114	521	132	520	123	(24943)	377	119	588	137	444	116
INTENDED GRADUATE FIELD														
ARTS AND HUMANITIES	(1781)	527	119	509	124	528	122	(1745)	404	137	520	135	440	116
SOCIAL SCIENCES	(6497)	485	117	483	124	496	120	(6061)	391	124	517	142	428	117
BIOSCIENCES	(2076)	498	105	533	116	530	118	(3222)	382	116	543	131	428	118
MATHEMATICS/ PHYS. SCIENCES	(2007)	520	109	645	104	582	120	(11742)	364	113	652	102	458	112
TOTAL	(13161)	498	115	522	132	521	124	(22770)	377	119	590	136	444	116
UNDERGRADUATE SCHOOL														
U.S. INSTITUTION	(14951)	500	114	523	131	523	123	(7271)	365	110	532	140	423	114
NON-U.S. INSTITUTION	(687)	462	121	474	136	470	121	(19134)	380	122	611	129	451	115
TOTAL	(15638)	498	115	521	132	520	124	(26405)	375	119	589	137	443	116
RESIDENCY STATUS														
RESIDENT ALIEN	(0)							(5131)	370	117	530	142	420	115
OTHER NON-U.S.	(0)			NOT APPLICABLE				(21324)	376	120	603	131	449	115
TOTAL	(0)							(26455)	375	119	589	136	443	116

NOTE: UNDERSCORING INDICATES A SUBGROUP VALUE HIGHER THAN THAT FOR THE TOTAL GROUP.

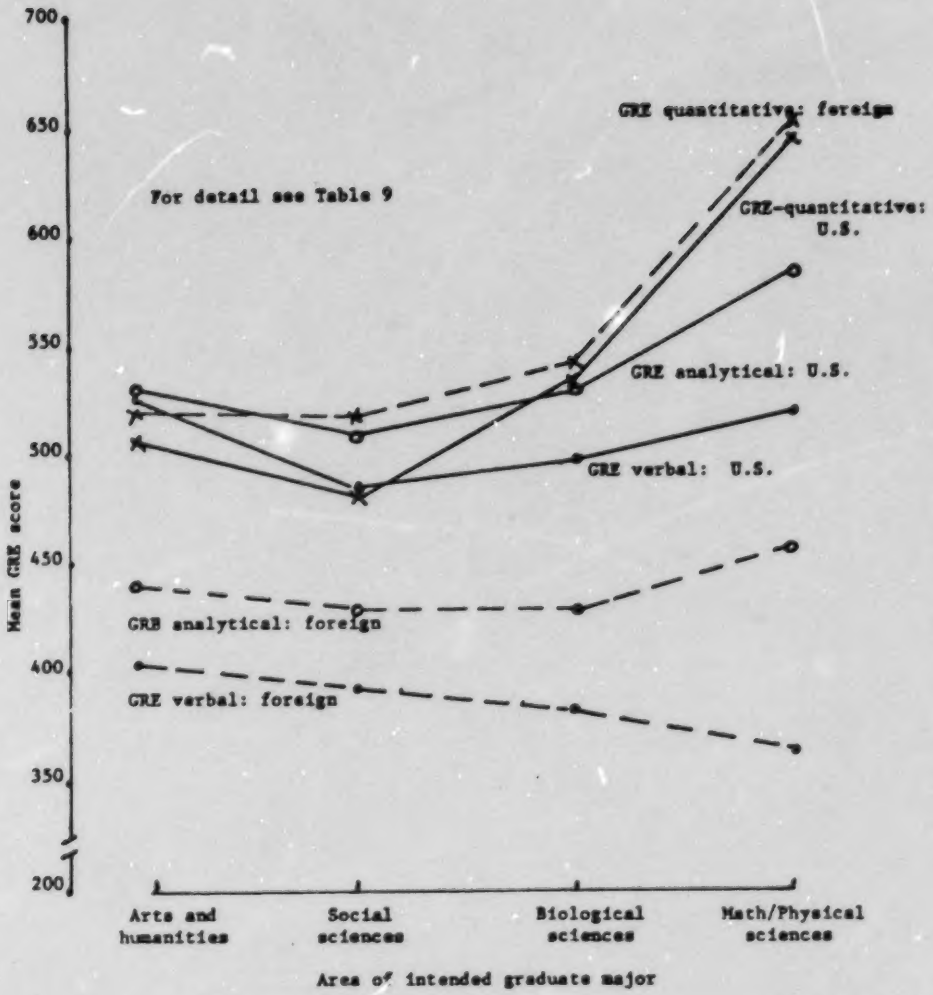

Figure 4.2. Profiles of GRE General Test score means for U.S. and foreign examinees, by four broad graduate major areas

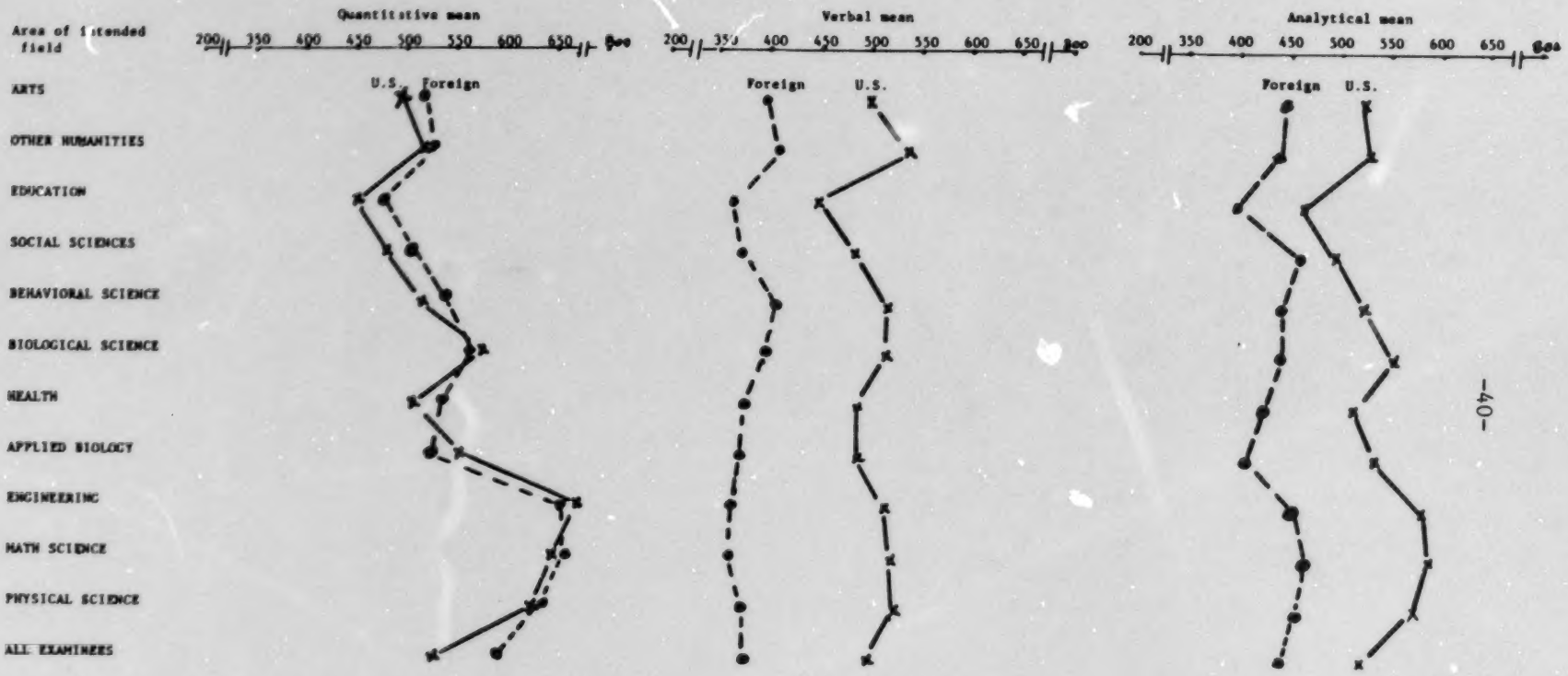

Figure 4.3. Profiles of GRE General Test score means for U.S. and foreign examinees in 11 graduate major areas

Source of data: Appendix A, Exhibits A.6, A.7, & A.8

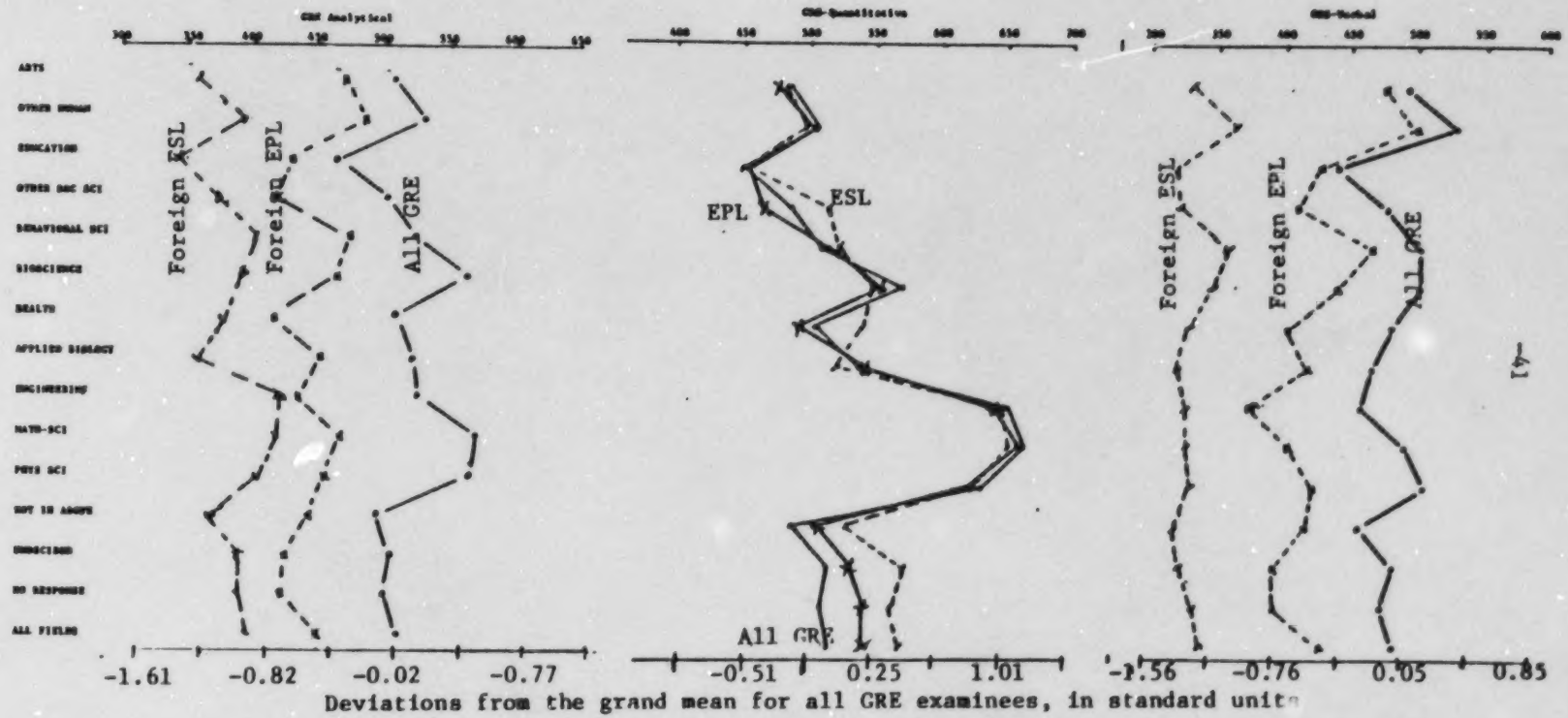

Figure 4.4. Profiles of verbal, quantitative, and analytical score means for all GRE examinees and for foreign examinees in 11 graduate major areas! Foreign examinees classified by EPL vs ESL status

analytical measures, however, is systematically lower for foreign ESL than for foreign EPL examinees, regardless of major area.

In evaluating the latter finding, it is useful to keep in mind that large numbers of self-reported EPL examinees come from non-native English speaking societies, are less than natively fluent in English, and are likely to have had a more limited range of exposure to English than their counterparts from major English speaking societies. Moreover, the verbal items reflect a cultural matrix that is more common to English-speaking societies than to others. As will be seen (for example, Section 5, Table 11) examinees from major English-speaking societies do not have depressed GRE verbal scores--their performance on the GRE General Test appears to be fully comparable to that of U.S. examinees in similar fields of study.

U.S. vs Other Undergraduate School

Foreign examinees who reported attending a U.S. undergraduate school had somewhat lower average scores on all the GRE measures than those who did not report attending a U.S. school. These comparisons, it should be kept in mind, are not controlled for major field, sex, or other variables.

Resident Alien vs Other non-U.S. Citizenship Status

Resident alien status was associated with lower means on all GRE measures. Again, the comparison is not controlled for major field, sex, or other potentially important variables.

Testing-Related Variables vs GRE Performance

Table 10 provides test data for examinees classified by location of the testing center (U.S. vs other), experience with the GRE (first-time vs repeating examinees), score reporting to departments, and whether a GRE Subject Test was taken.

Location of Test Center

Some 41 percent of foreign examinees were tested in the United States. These examinees had substantially lower scores on all GRE measures than their counterparts tested elsewhere--by 45, 90, and 48 scaled score points on the verbal, quantitative, and analytical measures. U.S. examinees tested in the U.S. also had lower means than the small number of U.S. examinees tested elsewhere.

Experience with the GRE

Among foreign examinees, first-time test takers had higher score means than repeaters on all GRE General Test measures, but especially on the verbal

TABLE 10. GRE GENERAL TEST SCORE DATA BY SELECTED TEST TAKING PATTERNS
FOR U.S. CITIZENS AND NON-U.S. CITIZENS: 1981-82

SUBGROUPING VARIABLE	U.S. CITIZENS							NON-U.S. CITIZENS						
		GRE-V		GRE-Q		GRE-A			GRE-V		GRE-Q		GRE-A	
	N	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	N	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
TEST CENTER														
IN U.S.	(15489)	498	115	521	132	520	124	(10899)	355	109	536	141	415	112
NOT IN U.S.	(149)	547	115	539	116	527	116	(15449)	390	124	626	120	463	114
TOTAL	(15638)	498	115	521	132	520	124	(26348)	375	119	589	137	443	116
EXPERIENCE WITH GRE														
FIRST TIME EXAMINEE	(13650)	496	114	523	133	523	124	(22379)	379	121	590	137	447	116
REPEATER	(1967)	514	119	512	126	504	118	(3937)	356	104	587	135	423	110
TOTAL	(15617)	498	115	521	132	520	124	(26316)	375	119	589	136	443	116
SENT SCORE REPORT(S) TO DEPARTMENT(S)														
YES	(13603)	497	115	519	132	518	124	(14621)	386	121	563	139	442	120
NO	(2034)	506	115	535	130	534	122	(5174)	344	102	571	137	421	111
TOTAL	(15637)	498	115	521	132	520	124	(19795)#	375	118	565	138	436	116
TOOK GRE SUBJECT TESTS (BY INTENDED GRADUATE FIELD)														
YES, ARTS AND HUMANITIES	(386)	562	124	524	117	556	124	(317)	462	147	502	138	466	123
YES, SOCIAL SCIENCES	(1225)	501	116	502	126	514	121	(1346)	435	125	550	134	469	121
YES, BIOSCIENCES	(553)	524	107	583	110	563	125	(691)	416	121	552	121	462	128
YES, MATHEMATICS AND PHYSICAL SCI.	(760)	535	109	664	98	600	117	(2763)	384	116	661	100	482	121
NO (ALL FIELDS)	(11999)	491	114	509	129	511	121	(14130)	363	114	550	138	422	113
YES (ALL FIELDS)	(3307)	522	115	563	133	551	126	(5586)	407	124	606	130	474	123
TOTAL SAMPLE	(15638)	498	115	521	132	520	124	(26455)	375	119	589	136	443	116

NOTE: UNDERSCORING INDICATES A SUBGROUP VALUE HIGHER THAN THAT FOR THE TOTAL GROUP.
#REDUCED N DUE TO SUBSTANTIAL MISSING DATA ON SCORE-REPORTING FOR EXAMINEES FROM INDIA AND TAIWAN. SEE NOTE TO TABLE 4.
#EXCEPT FOR THE "NO (ALL FIELDS)" AND "YES (ALL FIELDS)" CATEGORIES THESE ARE BASED ON THE GRADUATE FIELDS OF THESE SUBJECT TEST TAKERS.

and analytical measures; U.S. first-time examinees had higher quantitative and analytical means, but not verbal means.*

Subject Test Taking

Subject Test takers had higher means on the verbal, quantitative, and analytical measures than those who did not take a Subject Test. However, there were some variations by intended major in this regard. Among foreign examinees in every area of study, those taking a Subject Test had higher verbal and analytical means than foreign examinees generally, but for mathematics and physical science majors this was true only for the quantitative measure. Among U.S. examinees, Subject Test takers intending to major in the social sciences had lower means on all three GRE General Test measures than all U.S. examinees.

*In evaluating the performance of first-time test takers vs that of repeating test takers it is useful to recognize that both foreign and U.S. examinees who repeat tend to show some average improvement in score level on both the verbal and the quantitative measures. For example, Rock and Werts (1979) reported average score gains for U.S. repeaters of about 24 scaled score points on the verbal measure and 21 points on the quantitative measure, and average gains for foreign examinees were 21 and 31 points for the verbal and quantitative measures, respectively.

The fact that the foreign GRE repeaters gained more on the quantitative measure than on the verbal measure is of interest because there is reason to believe that they may be repeating the GRE primarily to improve their performance on the verbal measure (see Section 6, Figure 6.4, and related discussion). In evaluating evidence of higher average gain on the quantitative measure than on the verbal measure, the potential effect of field of study on the development of these abilities should be considered. For example:

(a) Foreign examinees are heavily concentrated in the quantitative fields of study; many are engaged in quantitative study between testings.

(b) College seniors in quantitative majors tend to earn higher scores, and majors in more verbal fields tend to earn lower scores on the GRE quantitative test than predicted from their high-school level scores on the Scholastic Aptitude Test mathematical section (Schrader, 1967; Wilson, 1970; Nichols, 1964).

Section 5

Performance of Foreign Examinees on the GRE General Test by Country of Citizenship

Generally speaking, in evaluating the GRE performance of examinees from different countries it is important to take into account the likelihood that they are not randomly selected representatives of prospective, enrolled, or temporarily nonenrolled graduate-level students in their respective countries. In addition, there is probably substantial variation among countries, not only in the patterns of personal, situational, and academic variables affecting the selection of nationals who become members of the GRE examinee pool, but also in the extent and nature of the prior screening of students for admission to higher educational institutions. There are also important differences among countries in the nature and quality of formal education at all levels.

From the analyses that have been presented in preceding sections, it is also apparent that the examinee contingents from various countries differ among themselves and from U.S. examinees with respect to variables that are known to be associated with differential levels of performance on verbal and quantitative measures. The variables include, for example:

a) percentage of examinees in primarily quantitative fields, which characteristically attract individuals with higher quantitative abilities, without regard to sex,

b) percentage of males, with characteristically higher average quantitative scores than females, without regard to field of study, and

c) English language backgrounds, ranging from native patterns of English language acquisition and usage in major English-speaking societies through acquisition as a second language under varied learning conditions in societies that do not afford opportunities for extensive English language usage.

The foregoing should be kept in mind in examining the data in Table 11, which provides means and standard deviations of scores on the verbal, quantitative, and analytical measures for examinees from each of the 25 leading countries and by world region.

There are marked differences by country in the level of GRE performance of examinees. The range of verbal means is greatest; a difference of 306 scaled score points separates the highest and the lowest means in the table. The corresponding range for the quantitative measure is 267 points, while for the analytical measure, it is 211 scaled score points.

The standard deviations of scores on the quantitative measure for the several country contingents are generally consistent with that for all U.S. examinees. However, substantially reduced quantitative dispersions are evident for the contingents from Taiwan, Hong Kong, Japan, and Korea. These four contingents had the highest quantitative means among the 25 leading contingents; they were among the lowest scoring on the verbal measure. On this

TABLE 11. GRE GENERAL TEST SCORE DATA BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND COUNTRY	NUMBER OF EXAMINEES N	VERBAL SECTION MEAN	VERBAL SECTION S. D.	QUANTITATIVE SECTION MEAN	QUANTITATIVE SECTION S. D.	ANALYTIC SECTION MEAN	ANALYTIC SECTION S. D.
AFRICA-TOTAL	(2173)	343	92	460	134	364	96
NIGERIA	(883)	336	76	419	124	342	77
AMERICA-TOTAL	(4297)	433+	123	527 *	138	459+	126
MEXICO	(631)	363	86	503	129	407	103
CANADA	(1470)	531+*	109	577 *	120	546+*	116
BRAZIL	(294)	385+	94	551 *	139	439	106
COLOMBIA	(236)	372	91	514	136	413	101
VENEZUELA	(396)	350	83	474	140	386	102
ASIA-TOTAL	(14443)	358	110	633+*	117	444+	107
TAIWAN	(3791)	302	62	686+*	81	454+	95
HONG KONG	(674)	362+	79	666+*	94	502+	102
INDIA	(4210)	431+	127	625+*	118	461+	115
INDONESIA	(275)	297	62	572 *	114	391	95
JAPAN	(894)	312	78	641+*	102	432	105
KOREA	(1547)	347	78	669+*	91	429	99
MALAYSIA	(628)	369	97	556 *	123	418	101
PAKISTAN	(266)	341	96	537 *	122	394	101
PHILIPPINES	(467)	431+	101	490	135	439	113
THAILAND	(778)	282	64	551 *	118	379	91
EUROPE-TOTAL	(2920)	437+	126	598+*	124	498+	116
TURKEY	(248)	332	84	618+*	106	453+	106
GREAT BRITAIN	(599)	550+*	123	594+*	112	553+*	117
FRANCE	(297)	428+	93	619+*	137	491+	113
FED. RP. GERMANY	(267)	439+	107	592+*	118	515+	113
GREECE	(424)	348	86	608+*	120	451+	100
MIDEAST-TOTAL	(2316)	304	79	537 *	128	399	103
IRAN	(1119)	302	74	547 *	122	400	100
LEBANON	(332)	323	72	570 *	112	432	102
SAUDI ARABIA	(222)	261	52	457	134	344	73
PACIFIC-TOTAL	(306)	544+*	143	594+*	131	532+*	132
AUSTRALIA	(210)	567+*	124	612+*	122	549+*	122
ALL NON-U. S.	(26455)	375	119	589 *	136	443	116
U. S. CITIZENS	(15638)	498	115	521	132	520	124

NOTE: "+" INDICATES HIGHER THAN "ALL NON-U. S."; "*" INDICATES HIGHER THAN "U. S. CITIZENS".

measure, reduced standard deviations were associated with the lowest observed means, whereas contingents with score dispersions comparable to those for U.S. examinees had the highest verbal means. The range of analytical means is less than that for the verbal and quantitative means; lower analytical standard deviations tend to be associated with lower than average mean scores, as was true for the verbal measure. Generally speaking, trends across countries with respect to performance on the analytical measure were similar to trends in performance on the verbal measure.

Perhaps the most important feature of the data in Table 11 relates to the differential levels and patterns of performance on the verbal and quantitative measures. In view of the relative novelty of the analytical measure, primary emphasis is placed on the verbal and quantitative measures whose properties are bettecr understood. Basic trends may be assessed more readily by reference to Figures 5.1 and 5.2.

Figure 5.1 is a plot of verbal and analytical means, and Figure 5.2 is a plot of verbal and quantitative means for the leading contingents. In Figure 5.1, the point (centroid) for each contingent was determined by using its verbal mean (vertical axis) and analytical mean (horizontal axis) as coordinates. The intersection of the major vertical and horizontal lines in the body of the figure coincides with the verbal and analytical centroid for all foreign examinees. The same general description applies to the verbal and quantitative mean plot in Figure 5.2. Centroids for world regions are included in each of the figures.

Figure 5.1 points up a relatively strong, curvilinear relationship between the verbal and analytical means. Above average performance on the analytical measure was largely associated with higher than average verbal performance (with reference to the all foreign examinee means). The primary exceptions involved examinee contingents with quite low verbal means but with high average performance on the quantitative measure (see centroids for Taiwan, Hong Kong, Turkey, and Greece, located in the lower right-hand quadrant of Figure 5.1 and the upper left-hand quadrant of Figure 5.2).

The relationships reflected in Figure 5.2 call for more detailed analysis. There is little evidence of a systematic positive correlation between the verbal and quantitative means of the contingents. In evaluating this, it is useful to consider the probable role of differences among the contingents with regard to characteristic levels of English proficiency, due to differences in basic patterns of English language acquistion and usage that tend to affect performance on the verbal and analytical measures, but that do not appear to affect quantitative performance. Note, for example, that the verbal and quantitative means for the U.S., Australian, British, and Canadian contingents do tend to show positive covariation--these are largely native English speaking groups, and verbal score means of the foreign examinees in these contingents tend to be comparable to those of U.S. examinees.

Differences between native-English speaking and the other foreign contingents in performance on the verbal measure appear to reflect factors associated with average differences in English proficiency as much as (or in addition to) differences in level of developed verbal reasoning ability, the

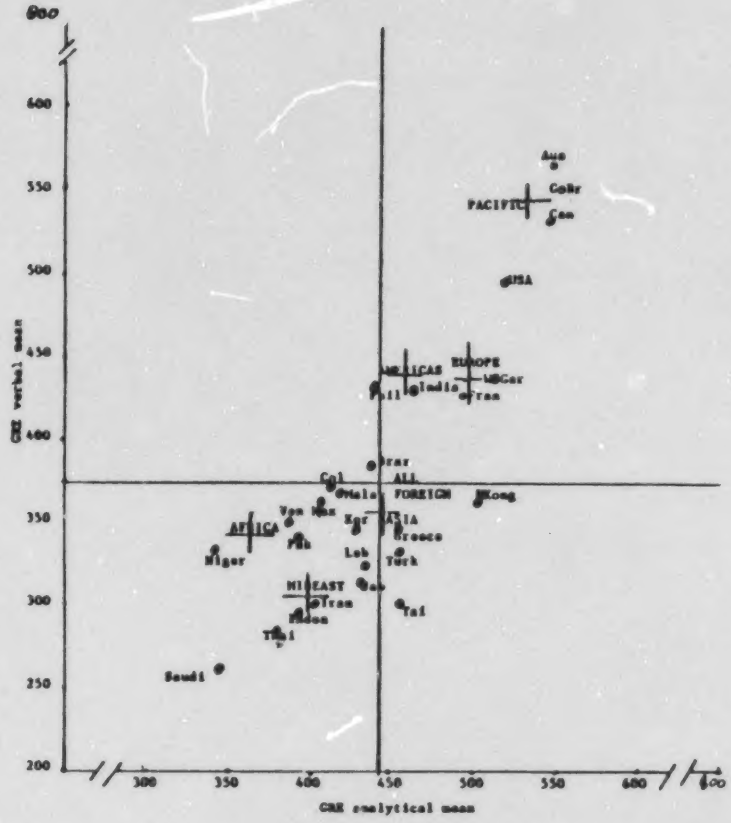

Figure 5.1. Plot of GRE verbal and analytical means for 25 leading foreign examinee contingents

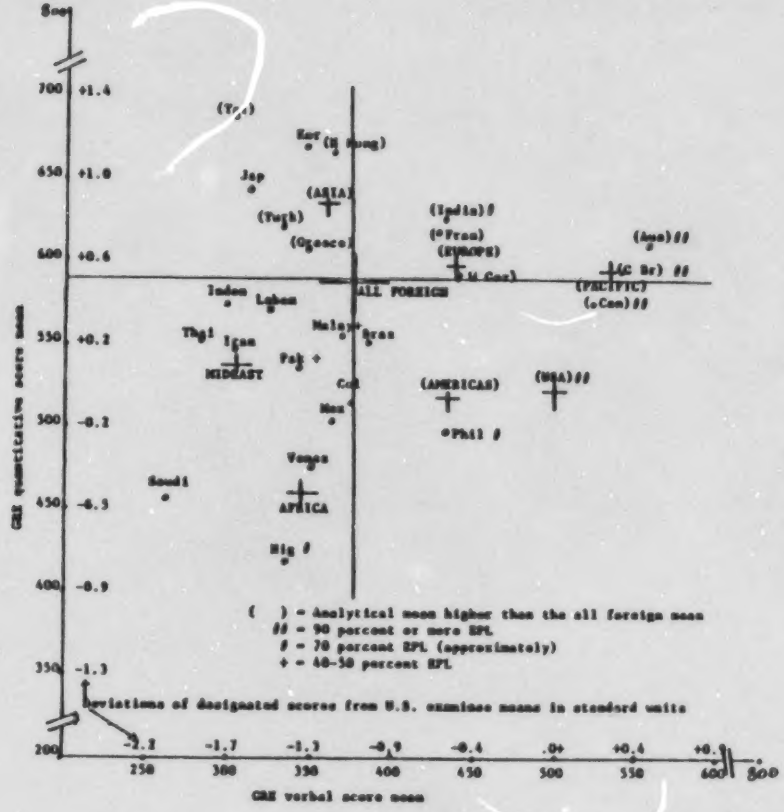

Figure 5.2. Plot of GRE verbal and quantitative means for 25 leading foreign examinee contingents

test construct in samples of U.S. examinees (and probably in samples of native-English speaking foreign examinees as well). For example, the contingents clustered toward the low end of the verbal scale (see Figure 5.2) are from countries whose nationals planning graduate study in the U.S. are known to have considerable difficulty with English, as indicated by low average scores on the Test of English as a Foreign Language, or TOEFL (ETS 1981), a test that is taken by prospective undergraduate and graduate students who need to demonstrate their profiency in English. On the other hand, prospective graduate students from countries at the high end of the verbal scale (India, France, West Germany, and the Philippines) characteristically perform better on TOEFL.

Based on a study of TOEFL examinees tested during 1977-1979 (Wilson 1982a, 1982b), those from India, France, West Germany, and the Philippines had TOEFL total scores averaging above 550; of graduate-level TOEFL examinees from the 18 countries whose GRE examinee contingents are clustered toward the low end of the GRE verbal scale in Figure 5.2, only two (those from Malaysia and Nigeria, with TOEFL means of 559 and 553) had comparably high TOEFL means. The TOEFL total means for graduate-level examinees from the remaining 16 contingents were considerably lower, ranging between 472 and 524.

The relationship between the two sets of data (characteristic TOEFL means by country, and GRE verbal means of examinees from the respective countries) is highlighted in Figure 5.3. Mean TOEFL scores for the 1977-1979 TOEFL examinees, by country, and mean GRE verbal scores for examinees in the present study from these same countries are plotted. In constructing the figure, the U.S., Australian, Canadian, and British contingents were placed at the same arbitrarily high level on the TOEFL scale, consistent with evidence regarding the performance of native speakers of English on this test (for example, Angoff and Sharon, 1971).

The GRE verbal means and the TOEFL total means are relatively strongly correlated, positively. In evaluating this, the substantial stability over time in the ranking of countries according to the mean TOEFL scores of their U.S.-graduate-school-bound nationals is relevant. Stability coefficients of .90+ have been reported for TOEFL means over several years (Wilson, 1982a). Similarly high levels of stability may occur in the ranking of countries in the performance of their nationals who become members of the GRE examinee population. The fact that there is a substantial positive correlation between the TOEFL and GRE verbal test scores of ESL examinees who take both tests is also relevant. As reported elsewhere (Wilson, 1982c), for a sample of over 3,500 TOEFL/GRE examinees, the correlation between TOEFL total and GRE verbal was .701, and that between TOEFL reading comprehension and GRE verbal was .691.

Although verbal performance appears to be affected by factors associated with English proficiency, level of performance on the quantitative test appears to be relatively independent of level of performance on the verbal measure (and, by inference, of level of developed English proficiency in samples of examinees planning to study in the U.S. who take the GRE). Referring back to Figure 5.2, the 11 contingents with quantitative means above the all foreign examinee mean (centroids above the main horizontal in Figure 5.2) include five (India, France, West Germany, Australia, and Great Britain) that are above the all foreign verbal mean, and six that are below the verbal mean

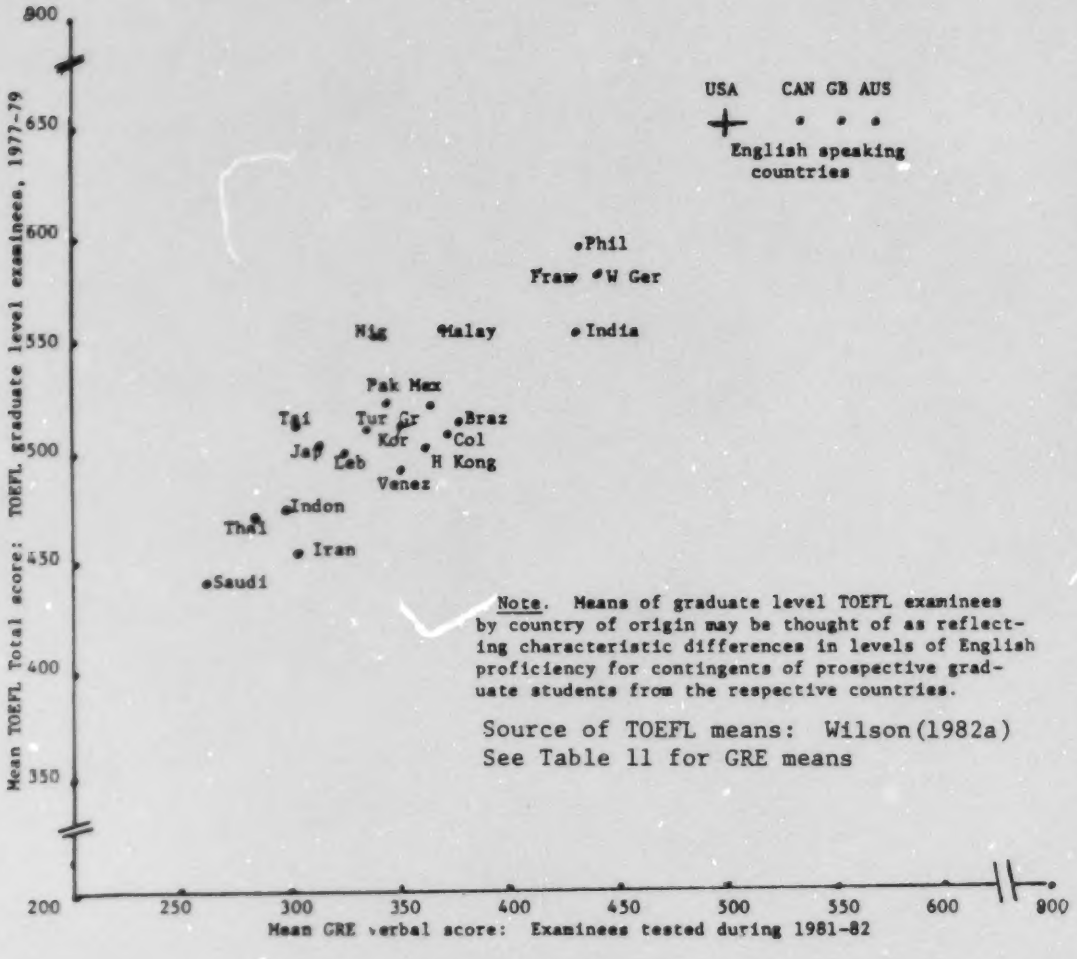

Figure 5.3. Relationship between average level of English proficiency (mean TOEFL total score) of samples of prospective U.S. graduate students during 1977-1979, by country of origin, and the mean GRE verbal scores of GRE examinees from the same countries tested during 1981-1982

Note: Similar trends have been found among foreign examinees taking the Graduate Management Admission Test (GMAT) and TOEFL. See Powers (1980).

(Taiwan, Korea, Hong Kong, and Japan--with the four highest quantitative means--plus Turkey and Greece).

These examinee contingents also differ in the percentage of majors in mathematics and physical science fields and the percentage of males. These are variables that might affect levels and patterns of quantitative performance relative to verbal performance. Figure 5.4 permits an assessment of the extent of association between these variables and (a) general level of GRE scores as defined by the average of verbal and quantitative score means, and (b) quantitative score minus verbal score. In effect, Q + V (vertical axis) for a contingent is plotted against Q - V (horizontal axis) for that contingent.

In the figure, contingents with 50 percent or more mathematics or physical science majors are identified by all capital letters and contingents with 70 percent or more males are identified by asterisks.

- o Both percentage of science majors and percentage of males appear to be associated with the quantitative-verbal differential, but not with overall level of GRE performance. For example, contingents with heavier concentrations of science majors are clustered toward the right hand side of the figure (with high Q relative to V). However, with respect to level these contingents were distributed about equally above and below the all foreign mean (the major horizontal in the figure).

- o The four native-English speaking contingents differ primarily in level of verbal and quantitative performance. The extreme dispersion of the remaining contingents with respect to quantitative score minus verbal score is due primarily to the depressed levels of GRE verbal performance of contingents with relatively high average quantitative performance.

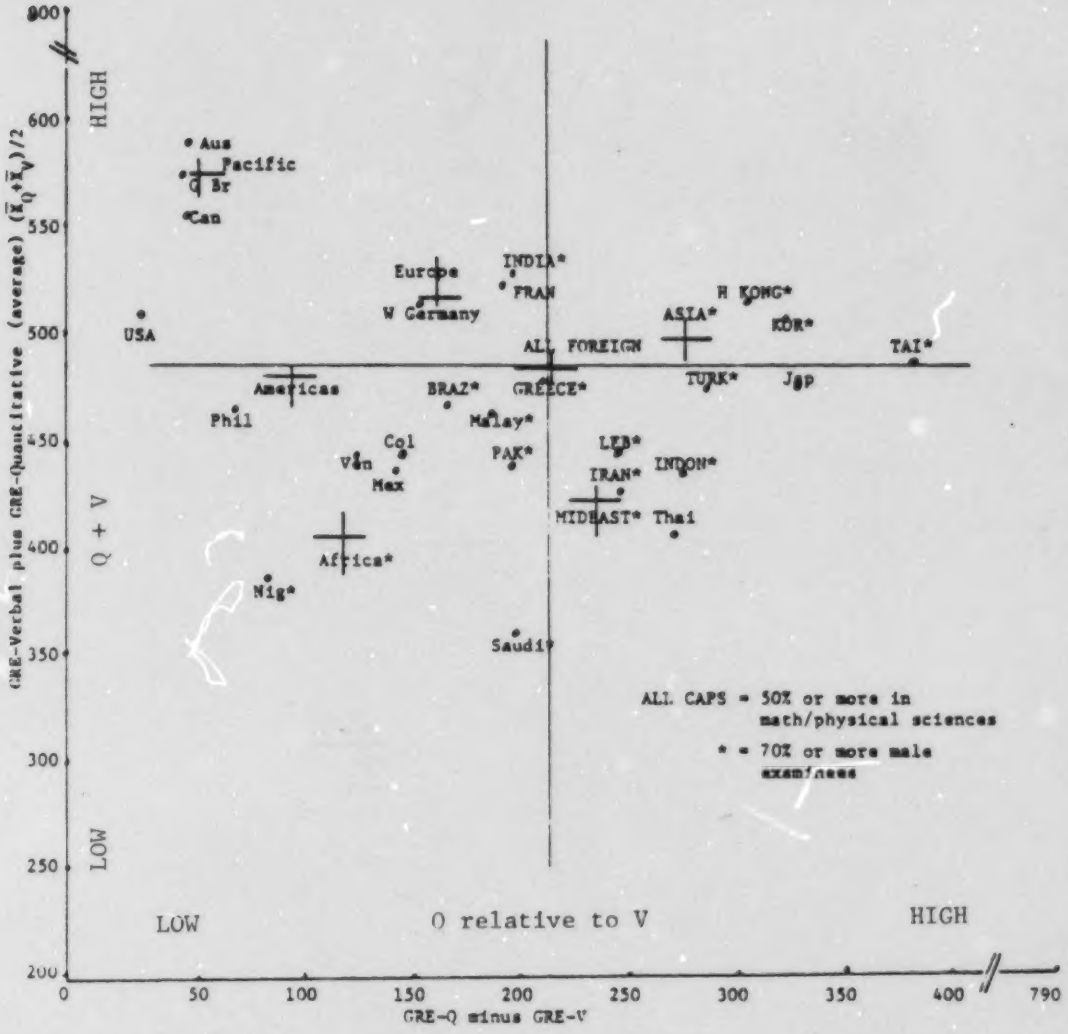

Figure 5.4. Centroids of examinee contingents defined by the sum of quantitative and verbal scores, and quantitative-verbal score difference, respectively

Section 6

Subgroup Differences in GRE Performance by Country

Section 4 presented GRE performance data for subgroups within the U.S. and general foreign examinee populations that were defined in terms of sex, educational level, intended field, and status on other personal background, academic, and testing-related variables. This section provides GRE score data for these subgroups, by country of citizenship and world region.

GRE Performance in Relation to Personal Background Variables, by Country

Table 12 shows means on the verbal, quantitative, and analytical measures, by country and world region, for males, examinees with a Ph.D. goal, those reporting a U.S. undergraduate instiution, and those reporting a status as resident aliens. In this and subsequent tables, means for all examinees by country and world region are included for comparative purposes. Within each contingent, subgroup means that are higher than the corresponding all-examinee means are underscored. These data permit assessment of the extent to which there is consistency across examinee contingents in the relationship between GRE performance and subgroup membership.

Sex Differences in GRE Performance

Males had higher quantitative scores than females in every leading contingent. However, in 16 of the 25 contingents, and in the total foreign sample, females had higher verbal means than males (see also Table 8 and Figure 3.1, and related discussion).

GRE Performance by Degree Goal

Ph.D. oriented examinees had higher means on all GRE measures than their master's degree oriented counterparts in all 25 leading contingents.

GRE Performance and Undergraduate Origin

Among all foreign examinees, those who reported attending a U.S. undergraduate school had lower means on all three GRE measures than their counterparts who did not report U.S. undergraduate origins. The selective factors underlying these differences are not known and, as may be seen in Table 12, the pattern is not consistent across all leading contingents. However, quantitative means for examinees reporting a U.S. undergraduate school were lower than the all-examinees mean in 22 of the 25 contingents, and this was true for the analytical measure in 16 of the 25.

TABLE 12. GRE GENERAL TEST SCORE MEANS BY RESIDENCY STATUS, SEX, DEGREE GOAL, AND ATTENDANCE AT A U. S. UNDERGRADUATE SCHOOL BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND COUNTRY		ALL EXAMINEES			MALES			PH. D. GOAL			U. S. UNDERGRADUATE			RESIDENT ALIEN		
	N	V	Q	A	V	Q	A	V	Q	A	V	Q	A	V	Q	A
AFRICA-TOTAL	(2173)	343	460	364	341	471	361	364	479	376	333	424	348	330	422	344
NIGERIA	(883)	336	419	342	336	429	339	354	441	349	327	404	336	324	399	331
AMERICA-TOTAL	(4297)	433	527	459	427	560	458	474	556	492	420	480	437	422	475	431
MEXICO	(631)	363	503	407	366	524	411	391	516	422	360	445	388	357	451	380
CANADA	(1470)	531	577	546	534	618	552	553	601	565	507	538	519	512	541	513
BRAZIL	(294)	385	551	439	389	569	448	403	583	450	412	500	447	398	497	421
COLOMBIA	(236)	372	514	413	373	552	415	399	520	420	401	484	416	384	469	393
VENEZUELA	(396)	350	474	386	354	510	392	398	534	436	359	451	389	346	430	352
ASIA-TOTAL	(14443)	358	633	444	360	651	448	378	648	455	346	595	437	340	593	422
TAIWAN	(3791)	302	686	454	305	700	459	314	703	468	320	651	444	313	663	440
HONG KONG	(674)	362	666	502	359	684	508	331	683	514	362	666	502	372	654	495
INDIA	(4210)	431	625	461	427	640	463	449	623	466	374	547	413	370	544	405
INDONESIA	(275)	297	572	391	296	579	392	323	594	405	302	571	402	290	533	359
JAPAN	(894)	312	641	432	300	663	430	334	657	446	332	605	434	327	608	429
KOREA	(1547)	347	669	429	346	680	431	353	679	434	340	630	427	332	639	417
MALAYSIA	(628)	369	556	418	365	571	416	394	593	442	366	560	432	348	531	420
PAKISTAN	(266)	341	537	394	343	548	399	356	547	410	351	526	413	350	481	379
PHILIPPINES	(467)	431	498	439	436	549	454	464	525	457	399	465	426	386	442	404
THAILAND	(778)	282	551	379	284	575	382	305	556	394	289	533	387	279	539	383
EUROPE-TOTAL	(2920)	437	598	498	430	630	501	461	615	518	438	552	481	455	542	481
TURKEY	(248)	332	618	453	326	630	449	362	640	481	361	617	477	325	574	437
GREAT BRITAIN	(599)	550	594	553	548	623	555	567	616	566	510	565	526	527	567	529
FRANCE	(297)	428	619	491	426	661	497	455	591	484	445	534	463	474	521	469
FED. RP. GERMANY	(267)	439	592	515	425	642	534	459	606	528	457	569	511	473	543	512
GREECE	(424)	348	608	451	347	628	451	370	634	479	359	554	428	357	536	419
MIDEAST-TOTAL	(2316)	304	537	399	300	549	398	323	552	413	305	543	402	304	527	390
IRAN	(1119)	302	547	400	299	564	400	321	564	416	305	550	404	302	540	393
LEBANON	(332)	323	570	432	317	584	434	353	569	448	317	562	422	328	568	421
SAUDI ARABIA	(222)	261	457	344	260	460	343	266	483	353	264	460	342	253	412	324
PACIFIC-TOTAL	(306)	544	594	532	536	622	534	587	632	574	485	532	477	513	539	492
AUSTRALIA	(210)	567	612	549	566	654	563	606	647	592	494	545	492	542	551	517
ALL NON-U. S.	(26455)	375	589	443	371	610	443	399	609	460	363	532	423	370	530	420
U. S. CITIZENS	(15638)	498	521	520	505	564	528	530	549	543	500	523	523	NOT APPLICABLE		

NOTE: UNDERSCORING INDICATES A SUBGROUP VALUE HIGHER THAN THAT FOR "ALL EXAMINEES" FOR THE GIVEN REGION/COUNTRY.

GRE Scores and Resident Alien Status

In the general population of foreign examinees, those reporting resident alien status had lower means on all three GRE measures than those reporting some other non-U.S. citizenship status. In all 25 leading contingents, this was true for the quantitative measure, and resident aliens had lower analytical means as well in 23 of the 25 contingents.

GRE Performance in Relation to Academic Variables, by Country

Table 13 summarizes mean score data by level of parental education, age, and EPL vs ESL status for each of the 25 leading contingents and for six world regions.

GRE Performance in Relation to Level of Parental Education

With very few exceptions, higher levels of parental educational attainment (father's and mother's) were associated with higher means on all three GRE measures. With regard to the verbal measure, in all 25 contingents h[illegible] parental educational attainment was associated with higher means when sub[illegible] ing was on father's education, and in 24 of 25 contingents when mother's education was the subgrouping variable. The exceptions to the general pattern of relationships between GRE performance and parental educational attainment tended to involve higher quantitative means and lower parental educational levels. Reasons for these exceptions are not clear. The apparently almost universal relationship between educational level of the parental family and performance on the GRE is noteworthy.

GRE Performance in Relation to Age

On the quantitative and analytical measures, in each country and world region, younger examinees (below 27 years of age) had higher means than their older counterparts. On the verbal measure this was also true in most of the leading contingents. However, older individuals had higher verbal means in contingents from Australia, Canada, Great Britain, Europe generally, as well as the United States. These contingents have relatively low proportions of examinees intending to major in quantitative fields (see Table 6).

GRE Performance in Relation to EPL vs ESL Status

For three contingents (Taiwan, Turkey, and Lebanon) the self-reported EPL subgroup had lower means on all three GRE measures. However, in 22 of the 25 leading contingents EPL examinees had higher verbal means than their ESL counterparts, consistent with expectation.

In 21 of the 25 contingents, EPL examinees had lower quantitative means than their ESL counterparts (see data on this variable in Table 8, and related

TABLE 13. GRE GENERAL TEST SCORE MEANS BY FAMILY EDUCATION, AGE AND ENGLISH AS PRIMARY LANGUAGE BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND COUNTRY		ALL EXAMINEES			FATHER GRADUATED 4-YEAR COLLEGE			MOTHER EDUCATED BEYOND HIGH SCHOOL			AGE IN YEARS LESS THAN 27			ENGLISH PRIMARY LANGUAGE		
	N	V	Q	A	V	Q	A	V	Q	A	V	Q	A	V	Q	A
AFRICA-TOTAL	(2173)	343	460	364	358	475	389	372	456	391	367	498	402	358	447	366
NIGERIA	(883)	336	419	342	345	409	351	343	403	347	348	435	366	336	417	341
AMERICA-TOTAL	(4297)	433	527	459	442	546	479	457	547	489	446	554	491	500	542	509
MEXICO	(631)	363	503	407	375	519	433	389	523	436	369	531	430	371	435	383
CANADA	(1470)	531	577	546	537	594	564	544	589	564	520	592	568	536	576	550
BRAZIL	(294)	385	551	439	399	559	457	387	563	463	385	587	466	486	541	498
COLOMBIA	(236)	372	514	413	392	516	432	386	528	431	381	537	433	442	468	439
VENEZUELA	(396)	350	474	386	359	476	393	360	488	407	371	524	431	426	450	428
ASIA-TOTAL	(14443)	358	633	444	384	635	458	393	633	467	373	646	465	413	609	451
TAIWAN	(3791)	302	686	454	394	680	457	397	680	464	301	691	468	299	668	436
HONG KONG	(674)	362	666	502	375	663	501	368	659	496	363	677	512	372	647	486
INDIA	(4210)	431	625	461	453	635	479	473	641	496	443	638	475	447	620	465
INDONESIA	(275)	297	572	391	310	579	421	296	593	416	386	624	432	316	589	407
JAPAN	(894)	312	641	432	320	640	445	320	646	445	321	634	445	306	604	446
KOREA	(1547)	347	669	429	346	670	437	348	663	441	361	678	450	353	655	408
MALAYSIA	(628)	369	556	418	382	551	439	421	549	462	379	585	454	400	568	431
PAKISTAN	(266)	341	537	394	353	539	403	373	553	443	340	553	410	369	510	393
PHILIPPINES	(467)	431	493	439	449	516	456	446	514	459	446	532	472	432	488	438
THAILAND	(778)	282	551	379	288	552	384	287	551	379	287	573	396	287	522	361
EUROPE-TOTAL	(2920)	437	598	498	440	607	508	453	601	514	431	613	508	527	580	535
TURKEY	(248)	332	618	453	350	627	476	359	612	467	333	633	461	314	564	412
GREAT BRITAIN	(599)	550	594	553	550	604	556	561	604	559	540	607	565	559	594	559
FRANCE	(297)	428	619	491	437	618	493	447	624	513	426	641	505	456	571	516
FED. RP. GERMANY	(267)	439	592	515	453	598	527	458	596	539	437	612	531	510	536	523
GREECE	(424)	343	608	451	356	630	470	363	609	468	348	615	458	359	523	422
MIDEAST-TOTAL	(2316)	304	537	399	324	553	422	335	563	434	313	561	420	318	520	399
IRAN	(1119)	302	547	4[illegible]	320	557	417	322	558	421	313	564	419	310	520	390
LEBANON	(332)	323	570	432	346	550	452	351	550	458	323	577	438	318	538	422
SAUDI ARABIA	(222)	261	457	344	272	481	346	261	423	328	266	509	364	282	497	352
PACIFIC-TOTAL	(306)	544	594	532	576	622	569	571	620	558	550	625	568	566	601	547
AUSTRALIA	(210)	567	612	549	579	625	579	589	624	569	566	643	587	575	611	553
ALL NON-U. S.	(26455)	375	589	443	396	604	462	411	596	472	388	612	469	436	570	462
U. S. CITIZENS	(15638)	498	521	520	523	553	551	515	538	540	493	539	539	500	523	523

NOTE: UNDERSCORING INDICATES A VALUE HIGHER THAN THAT FOR "ALL EXAMINEES" FOR THE GIVEN REGION/COUNTRY.

discussion). Evaluation of this pattern of findings would call for control over variables such as major field and sex within the respective contingents.

The consistently higher verbal means for EPL examinees than for ESL examinees suggest that the self-reported EPL examinees do tend to be somewhat more proficient in English than their ESL counterparts. It is useful to examine the effect of controlling for EPL status on the relationship between the verbal and quantitative means of the respective examinee contingents, as shown in Figure 6.1. In this figure, a scatterplot of verbal and quantitative means for EPL examinees only is shown; a plot of means for all examinees (EPL plus ESL) is included for comparison.

- o Comparing the EPL and the all examinee plots, the verbal and quantitative means in the EPL plot present a somewhat more orderly pattern of positive covariation than those in the all examinee plot. The centroids for Taiwan, Korea, and Hong Kong are three of the principal high quantitative but low verbal outliers in both plots.

GRE Performance in Relation to Educational Level, By Country

Table 14 shows verbal, quantitative, and analytical score means, by country, for all examinees and for examinees classified as enrolled undergraduates, nonenrolled bachelor's degree holders, enrolled graduate students, or nonenrolled master's degree holders at time of testing. Data for unclassified examinees are not shown.

GRE Performance by Broad Graduate Major Areas, by Country

Means on the three GRE measures are shown in Table 15 for examinees classified according to four broad major areas. Basic trends in the data are highlighted in Figure 6.2, which provides scatterplots of GRE verbal and quantitative means for the leading countries, and world regions, for intended majors (a) in social sciences and (b) mathematics and physical sciences. These two areas account for almost 80 percent of all foreign examinees and 64 percent of all U.S. examinees.

In Figure 6.2, for each plot, the intersection of the major vertical and horizontal lines identifies the verbal and quantitative mean centroid for all foreign examinees without regard to field. The location of the centroid for foreign mathematics and physical science majors, relative to the all examinee centroid, indicates their better than average quantitative performance and lower than average verbal performance, while the location of the social science centroid indicates the opposite pattern.

No mathematics and physical science contingent falls below the quantitative grand mean (main horizontal) and above the verbal grand mean (main vertical); for 21 of the 25 leading contingents, mathematics and physical science centroids are located above the grand mean on the quantitative measure; for 20 of the 25 social science contingents, centroids are located below the quantitative grand mean.

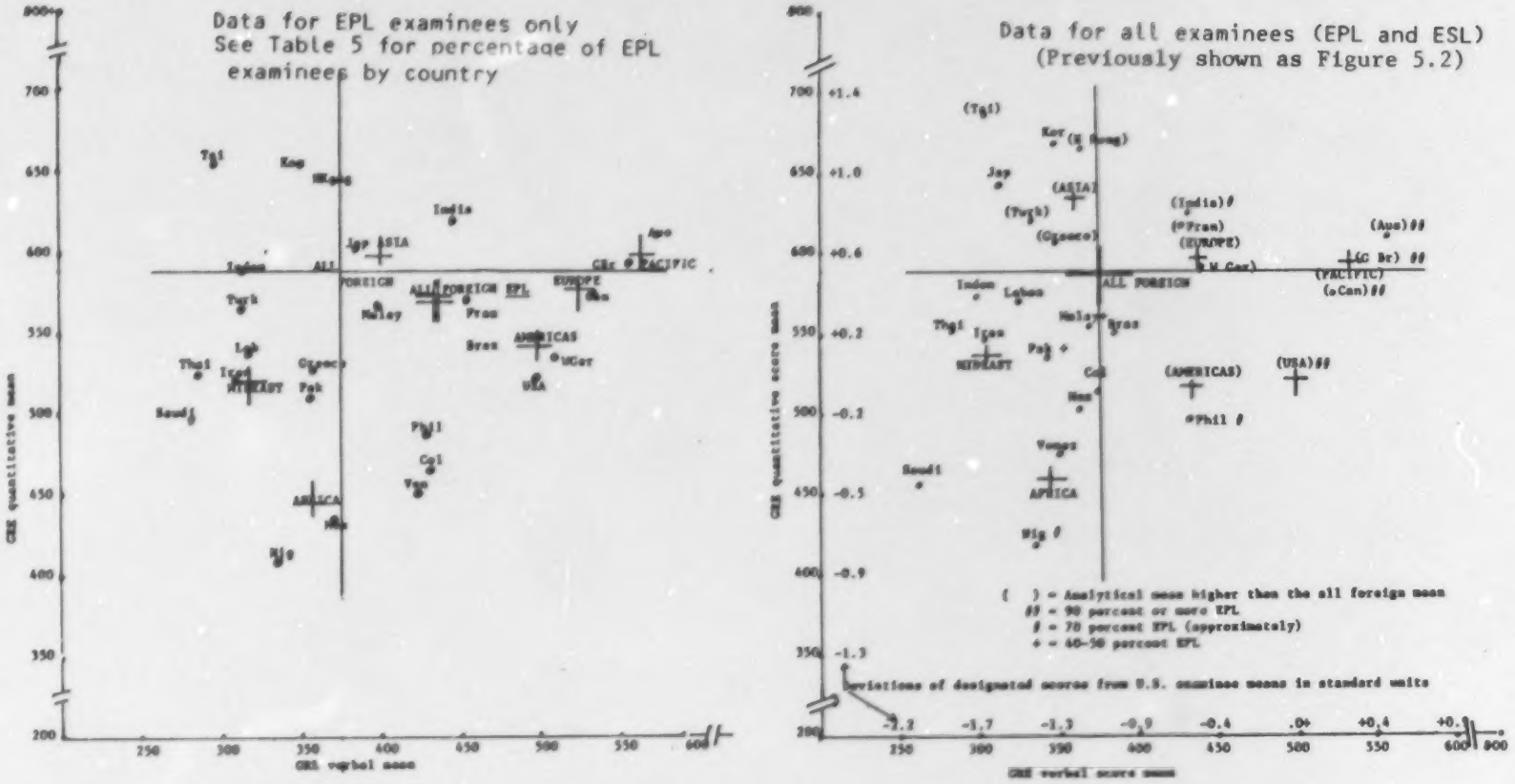
Data for EPL examinees only
See Table 5 for percentage of EPL examinees by country
GRE quantitative mean
GRE verbal mean
Data for all examinees (EPL and ESL)
(Previously shown as Figure 5.2)
GRE quantitative score mean
GRE verbal score mean
( ) = Analytical mean higher than the all foreign mean
= 90 percent or more EPL
= 70 percent EPL (approximately)
+ = 40-50 percent EPL
Deviations of designated scores from U.S. examinee means in standard units

Figure 6.1. Comparison of covariation between verbal and quantitative means of examinee contingents from leading countries (a) when means are based only on data for examinees reporting better communication in English than in any other language (EPL examinees) and (b) when means are based on data for all examinees regardless of EPL/ESL status

TABLE 14. GRE GENERAL TEST SCORE MEANS BY EDUCATIONAL STATUS,
BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND COUNTRY	N	ALL EXAMINEES V	Q	A	ENROLLED U. G. V	Q	A	NON-ENROLLED U. G. V	Q	A	ENROLLED GRADUATE V	Q	A	NON-ENR. MASTER V	Q	A
AFRICA-TOTAL	(2173)	343	460	364	341	437	363	360	481	380	333	442	351	336	467	356
NIGERIA	(883)	336	419	342	320	408	330	350	465	363	332	389	329	347	424	339
AMERICA-TOTAL	(4297)	433	527	459	463	540	499	442	534	462	413	506	433	306	504	409
MEXICO	(631)	363	503	407	306	532	451	365	515	422	353	484	303	360	482	381
CANADA	(1470)	531	577	546	523	583	559	550	574	551	537	584	546	525	553	492
BRAZIL	(294)	385	551	439	399	542	466	417	552	445	383	550	436	370	551	436
COLOMBIA	(236)	372	514	413	414	509	445	367	521	401	380	507	411	324	515	403
VENEZUELA	(396)	350	474	386	384	467	411	368	508	405	342	453	380	324	483	368
ASIA-TOTAL	(14443)	358	633	444	382	660	485	340	644	441	348	625	432	345	607	417
TAIWAN	(3791)	302	686	454	305	695	485	300	685	450	298	675	441	314	699	455
HONG KONG	(674)	362	666	502	360	681	509	383	651	502	355	627	474	382	621	490
INDIA	(4210)	431	625	461	501	609	526	397	610	430	425	610	451	391	576	420
INDONESIA	(275)	297	572	391	316	632	443	287	583	386	284	536	357	302	547	382
JAPAN	(894)	312	641	432	318	615	442	311	648	427	319	638	422	304	663	438
KOREA	(1547)	347	669	429	356	662	447	340	675	429	354	666	431	342	677	418
MALAYSIA	(628)	369	556	418	367	501	444	387	577	433	372	530	403	358	519	377
PAKISTAN	(266)	341	537	394	369	582	456	371	545	415	310	504	351	341	536	369
PHILIPPINES	(467)	431	498	439	445	556	501	422	509	439	448	509	449	420	433	396
THAILAND	(778)	282	551	379	294	586	417	292	575	372	276	541	378	275	542	369
EUROPE-TOTAL	(2920)	437	598	498	436	602	509	462	600	501	433	590	490	428	584	473
TURKEY	(248)	332	618	453	340	642	473	327	589	431	334	608	463	288	586	407
GREAT BRITAIN	(599)	550	594	553	537	607	574	559	585	544	586	612	562	566	581	544
FRANCE	(297)	428	619	491	441	587	485	423	624	470	440	621	500	429	583	457
FED. RP. GERMANY	(267)	439	592	515	471	559	525	453	542	496	406	585	493	471	546	476
GREECE	(424)	348	608	451	357	619	465	332	588	435	334	568	426	345	605	431
MIDEAST-TOTAL	(2316)	304	537	399	318	562	424	300	543	393	291	512	380	292	509	375
IRAN	(1119)	302	547	400	314	558	418	301	564	396	285	535	382	281	517	372
LEBANON	(332)	323	570	432	322	574	437	315	570	416	321	551	413	323	512	401
SAUDI ARABIA	(222)	261	457	344	271	506	367	274	495	350	255	423	337	253	450	333
PACIFIC-TOTAL	(306)	544	594	532	502	586	539	601	608	553	521	591	522	547	568	484
AUSTRALIA	(210)	567	612	549	530	617	562	618	630	559	525	614	546	566	575	498
ALL NON-U. S.	(26455)	375	589	443	394	598	474	370	602	443	360	569	424	358	566	413
U. S. CITIZENS	(15638)	490	521	520	497	543	542	514	527	526	462	471	473	515	496	493

NOTE: UNDERSCORING INDICATES A SUBGROUP VALUE HIGHER THAN THAT FOR "ALL EXAMINEES" FOR THE GIVEN REGION/COUNTRY.

TABLE 15. GRE GENERAL TEST SCORE MEANS BY INTENDED GRADUATE FIELD,
BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND		ALL EXAMINEES			ARTS AND HUMANITIES			SOCIAL SCIENCE			BIOLOGICAL SCIENCE			MATHEMATICS AND PHYSICAL SCIENCE		
	N	V	Q	A	V	Q	A	V	Q	A	V	Q	A	V	Q	A
AFRICA-TOTAL	(2173)	343	460	364	343	402	349	344	392	349	346	449	356	343	555	392
NIGERIA	(803)	336	419	342	324	380	328	326	358	329	342	410	338	350	520	367
AMERICA-TOTAL	(4297)	433	527	463	467	472	463	445	488	454	432	508	454	410	618	472
MEXICO	(631)	363	503	407	370	393	373	364	450	387	364	473	403	363	576	428
CANADA	(1470)	531	577	546	550	545	530	526	546	529	533	590	548	542	708	598
BRAZIL	(294)	385	551	439	370	388	403	393	405	429	372	503	415	389	629	457
COLOMBIA	(236)	372	514	413	360	320	335	373	455	401	374	477	413	376	612	442
VENEZUELA	(396)	350	474	386	357	332	375	347	398	366	352	429	352	356	572	420
ASIA-TOTAL	(14443)	358	633	444	353	567	423	358	569	419	360	592	426	360	671	459
TAIWAN	(3791)	302	686	454	310	631	441	308	644	434	315	605	462	300	703	462
HONG KONG	(674)	362	666	502	393	598	483	375	626	484	388	656	505	351	700	510
INDIA	(4210)	431	625	461	453	488	424	465	521	448	408	538	422	429	656	469
INDONESIA	(275)	297	572	391	284	476	348	291	495	350	305	553	372	304	633	432
JAPAN	(894)	312	641	432	314	504	414	325	623	432	300	644	416	299	701	445
KOREA	(1547)	347	669	429	350	601	411	364	655	433	346	651	410	335	696	436
MALAYSIA	(628)	369	556	418	391	467	409	355	481	373	377	556	417	375	626	453
PAKISTAN	(266)	341	537	394	450	558	496	349	459	368	338	446	360	335	530	407
PHILIPPINES	(467)	431	498	439	434	437	410	436	447	426	423	462	416	440	605	487
THAILAND	(778)	282	551	379	296	490	368	280	484	355	296	500	395	281	624	404
EUROPE-TOTAL	(2920)	437	598	498	478	511	487	462	547	491	448	583	503	408	665	505
TURKEY	(248)	332	618	453	385	530	478	362	547	448	363	537	455	322	648	457
GREAT BRITAIN	(599)	550	594	553	616	569	572	570	558	549	523	579	545	506	660	549
FRANCE	(297)	428	619	491	423	478	437	439	523	455	463	620	507	426	691	514
FED. RP. GERMANY	(267)	439	592	515	457	492	480	447	571	512	478	618	532	407	675	540
GREECE	(424)	348	608	451	358	551	462	355	501	413	343	579	425	349	655	466
MIDEAST-TOTAL	(2316)	304	537	399	319	498	391	303	457	374	311	481	379	302	591	419
IRAN	(1119)	302	547	400	321	498	379	306	463	380	312	481	375	300	591	416
LEBANON	(332)	323	570	432	351	512	383	340	492	402	366	528	450	311	597	442
SAUDI ARABIA	(222)	261	457	344	264	468	361	251	384	326	266	411	320	268	542	365
PACIFIC-TOTAL	(306)	544	594	532	572	571	528	553	572	518	553	555	524	531	698	580
AUSTRALIA	(210)	567	612	549	595	589	551	562	589	522	582	568	539	557	714	604
ALL NON-U. S.	(26455)	375	589	443	404	520	440	391	517	428	382	543	428	364	652	458
U. S. CITIZENS	(15633)	498	521	520	527	509	528	485	483	496	498	533	530	520	645	582

NOTE: UNDERSCORING INDICATES A SUBGROUP VALUE HIGHER THAN THAT FOR "ALL EXAMINEES" FOR THE GIVEN REGION/COUNTRY.

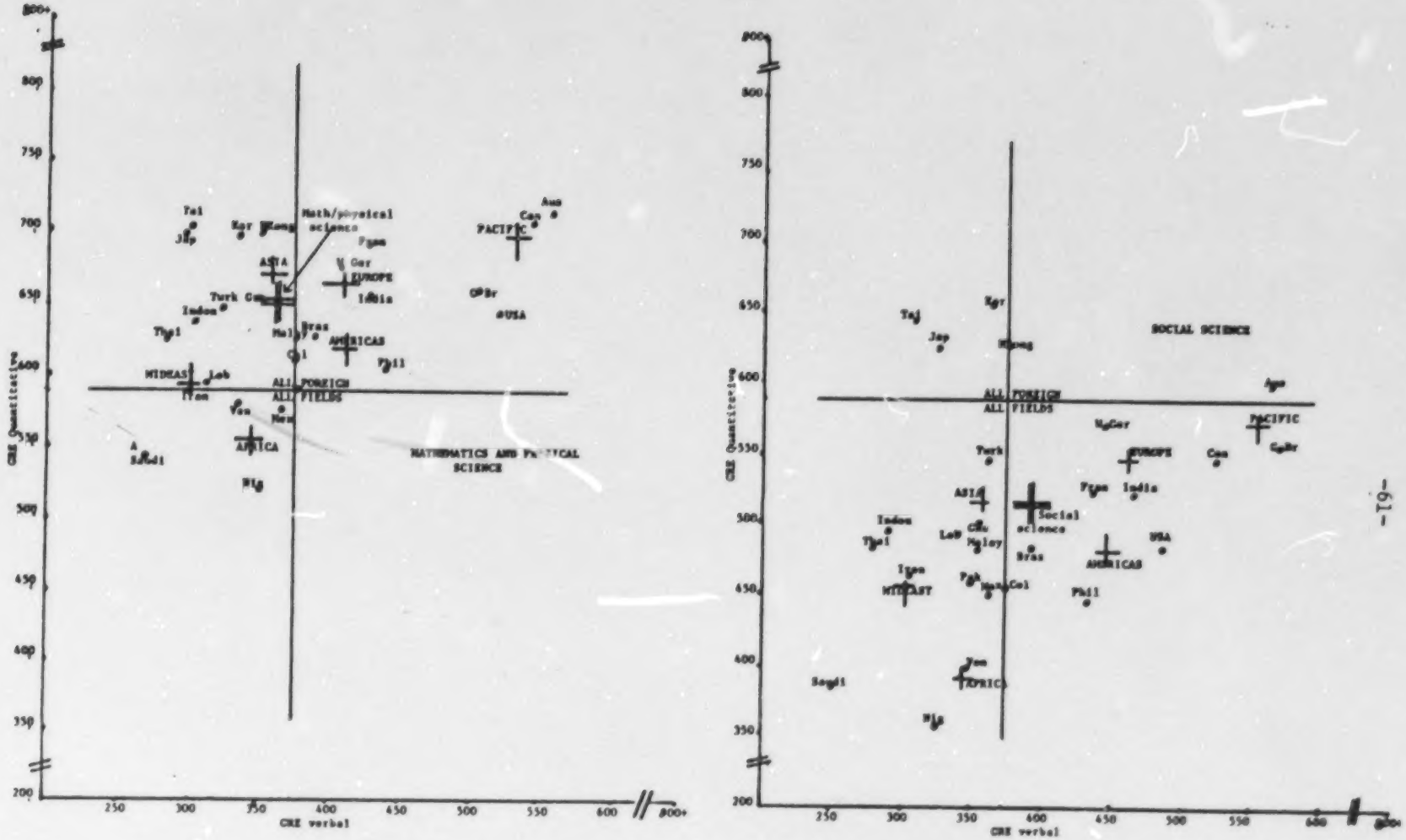

Figure 6.2. Covariation between verbal and quantitative means for examinees classified by country and by two broad graduate major areas: Mathematics/physical sciences and social sciences, respectively

Ignoring centroids for the contingents from Taiwan, Japan, Korea, and Hong Kong (persistent outliers with very high quantitative and very low verbal means), it is evident that in these scatterplots involving means for examinees by major areas of study, there is a pattern of positive covariation between verbal and quantitative means. The scatterplot of means for examinees without rgard to field of study, it should be recalled, did not exhibit an orderly, positive pattern of covariation.

GRE Performance in Relation to Testing-Related Characteristics, By Country

Table 16 provides data on GRE score means that permit comparisons of the following subgroups, by country: examinees who reported scores to departments vs those who did not do so, first-time test takers vs repeaters, examinees tested in the United States vs those tested elsewhere, and GRE General Test takers who also took a GRE Subject Test vs those who did not do so.

GRE Performance in Relation to Score Reporting and Test Repetition

It has been established (a) that fewer foreign examinees (72 percent) than U.S. examinees (87 percent) designated particular institutions or departments to receive their GRE score reports, (b) that roughly equal percentages of U.S. and foreign examinees were repeaters (15 percent foreign and 13 percent U.S.) but that the incidence of test repetition varied considerably by country, and (c) that contingents with higher percentages of repeaters tended to have a higher incidence of non-score-reporting.

It may be argued that both test repetition and nonreporting of scores reflect examinee reaction to lower than expected test performance, especially on the verbal measure. Score reporters had verbal means that were higher than or equal to the all-examinee mean and, by inference, the mean for nonreporters, in 23 of 25 leading contingents.

In the circumstances, it is reasonable to expect that (a) the percentage of examinees reporting scores should tend to increase across countries as level of performance on the verbal measure increases and (b) the percentage of repeaters in an examinee contingent should tend to decrease as the level of verbal performance increases. Support for this proposition is provided in Figures 6.3 and 6.4. Figure 6.3 is a scatterplot of GRE verbal score means vs the percentage of examinees reporting GRE scores to departments. The highest incidence of nonreporting was found among examinees from countries with the lowest mean scores on the verbal measure and the incidence of score reporting tended to increase with GRE verbal score means.

Figure 6.4 shows parallel patterns of covariation between the incidence of GRE General Test repetition by country and (a) mean GRE verbal score of examinees in the respective contingents, from Table 16, and (b) the TOEFL total-score means of prospective graduate students from the respective countries who took TOEFL during 1977-79 (see also Figure 5.3, Section 5, and related discussion). It is clear that a relatively strong inverse relation-

TABLE 16. GRE GENERAL TEST SCORE MEANS FOR SELECTED TESTING-RELATED SUBGROUPS BY COUNTRY OF CITIZENSHIP AND REGION: 1981-82

REGION AND COUNTRY		ALL EXAMINEES			REPORT SCORES			NON-REPEATER			DOMESTIC (U.S.) CENTER			SUBJECT TEST		
	N	V	Q	A	V	Q	A	V	Q	A	V	Q	A	V	Q	A
AFRICA-TOTAL	(2173)	343	460	364	345	462	365	344	463	367	330	435	347	361	504	391
NIGERIA	(883)	336	419	342	337	421	345	333	419	344	327	404	334	357	453	360
AMERICA-TOTAL	(4297)	433	527	459	438	530	463	436	529	463	400	480	421	462	566	498
MEXICO	(631)	363	503	407	365	505	408	364	500	410	349	474	384	385	528	429
CANADA	(1470)	531	577	546	531	577	546	532	579	549	510	543	517	539	600	569
BRAZIL	(294)	385	551	439	388	554	446	387	551	442	376	472	417	395	601	462
COLOMBIA	(236)	372	514	413	373	511	410	371	512	412	370	405	401	380	553	427
VENEZUELA	(396)	350	474	386	356	481	394	349	473	390	338	449	369	371	492	415
ASIA-TOTAL	(14443)	358	633	444	351	605	430	360	632	445	335	599	426	376	639	459
TAIWAN	(3791)	302	686	454	321	678	449@	299	684	453	310	667	441	345	707	504
HONG KONG	(674)	362	666	502	371	672	504	365	668	504	357	663	498	373	700	524
INDIA	(4210)	431	625	461	391	565	428@	432	624	462	379	554	416	425	608	453
INDONESIA	(275)	297	572	391	301	561	393	296	566	395	294	569	390	303	612	430
JAPAN	(894)	312	641	432	316	639	433	311	640	433	313	604	422	318	603	455
KOREA	(1547)	347	669	429	345	663	427	345	668	429	332	641	416	351	606	446
MALAYSIA	(628)	369	556	418	375	553	420	368	556	420	365	561	428	400	616	451
PAKISTAN	(266)	341	537	394	349	539	395	338	533	391	342	513	396	374	575	429
PHILIPPINES	(467)	431	498	439	433	498	439	433	502	444	403	468	426	451	538	464
THAILAND	(778)	282	551	379	286	546	376	279	548	379	275	535	373	299	576	410
EUROPE-TOTAL	(2920)	437	598	498	447	598	504	440	600	501	437	556	479	437	629	511
TURKEY	(248)	332	618	453	337	619	463	334	617	459	329	601	444	344	631	468
GREAT BRITAIN	(599)	550	594	553	559	593	559	553	594	556	524	565	528	564	618	564
FRANCE	(297)	428	619	491	453	617	490	428	624	493	447	534	463	435	652	507
FED. RP. GERMANY	(267)	439	592	515	451	588	517	436	592	516	468	556	511	433	618	519
GREECE	(424)	348	608	451	357	609	458	348	609	451	351	557	429	353	651	468
MIDEAST-TOTAL	(2316)	304	537	399	312	549	409	307	539	405	300	532	394	321	571	427
IRAN	(1119)	302	547	400	308	551	405	303	546	405	301	545	397	323	577	437
LEBANON	(332)	323	570	432	332	579	445	325	575	436	317	564	421	332	586	439
SAUDI ARABIA	(222)	261	457	344	266	471	344	258	457	343	260	441	341	261	478	343
PACIFIC-TOTAL	(306)	544	594	532	555	600	535	549	598	537	474	534	476	580	670	600
AUSTRALIA	(210)	567	612	549	573	614	545	569	614	551	509	556	508	589	680	609
ALL NON-U. S.	(26455)	375	589	443	386	563	442	379	590	447	355	536	415	407	606	474
U. S. CITIZENS	(15638)	498	521	520	497	519	518	496	523	523	498	521	520	522	563	551

NOTE: UNDERSCORING INDICATES A SUBGROUP VALUE HIGHER THAN THAT FOR "ALL EXAMINEES" FOR A GIVEN REGION/COUNTRY.
@CODING FOR SCORE REPORTING MISSING FOR A SUBSTANTIAL MAJORITY OF EXAMINEES (SEE NOTE, TABLE 4).

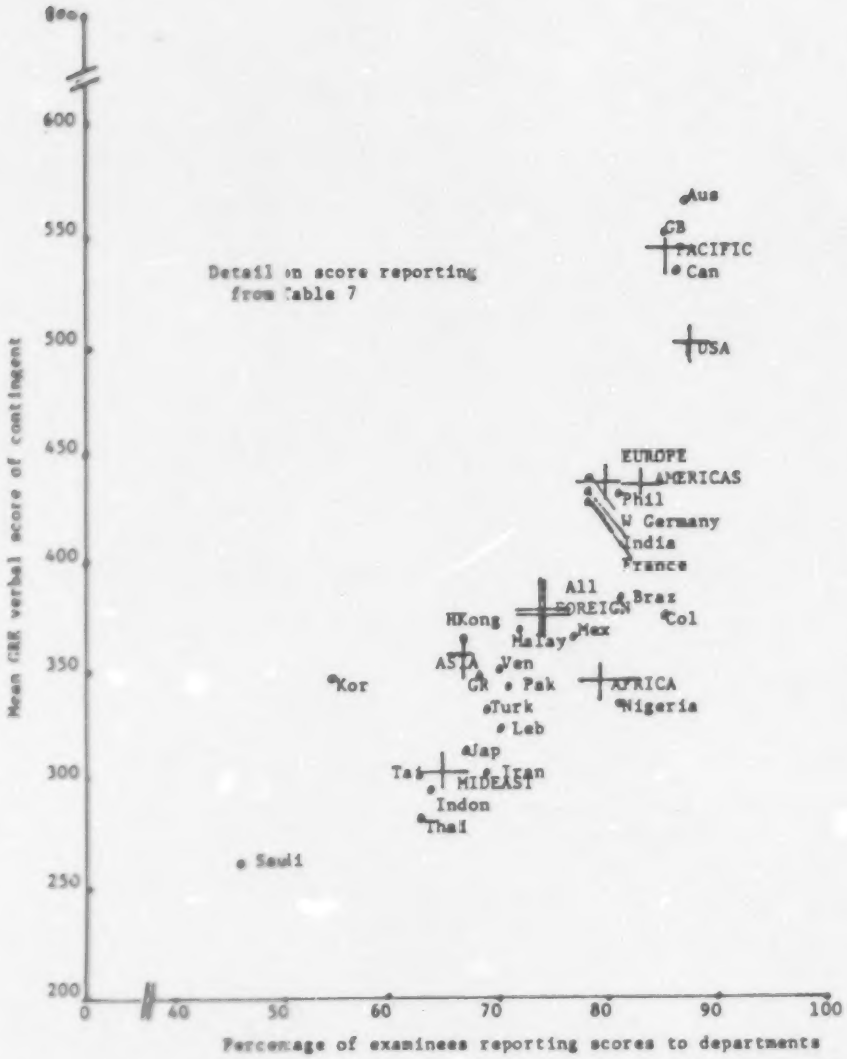

Figure 6.3. Covariation between the GRE verbal means for the leading foreign examinee contingents and the percentage of examinees reporting scores to schools/departments

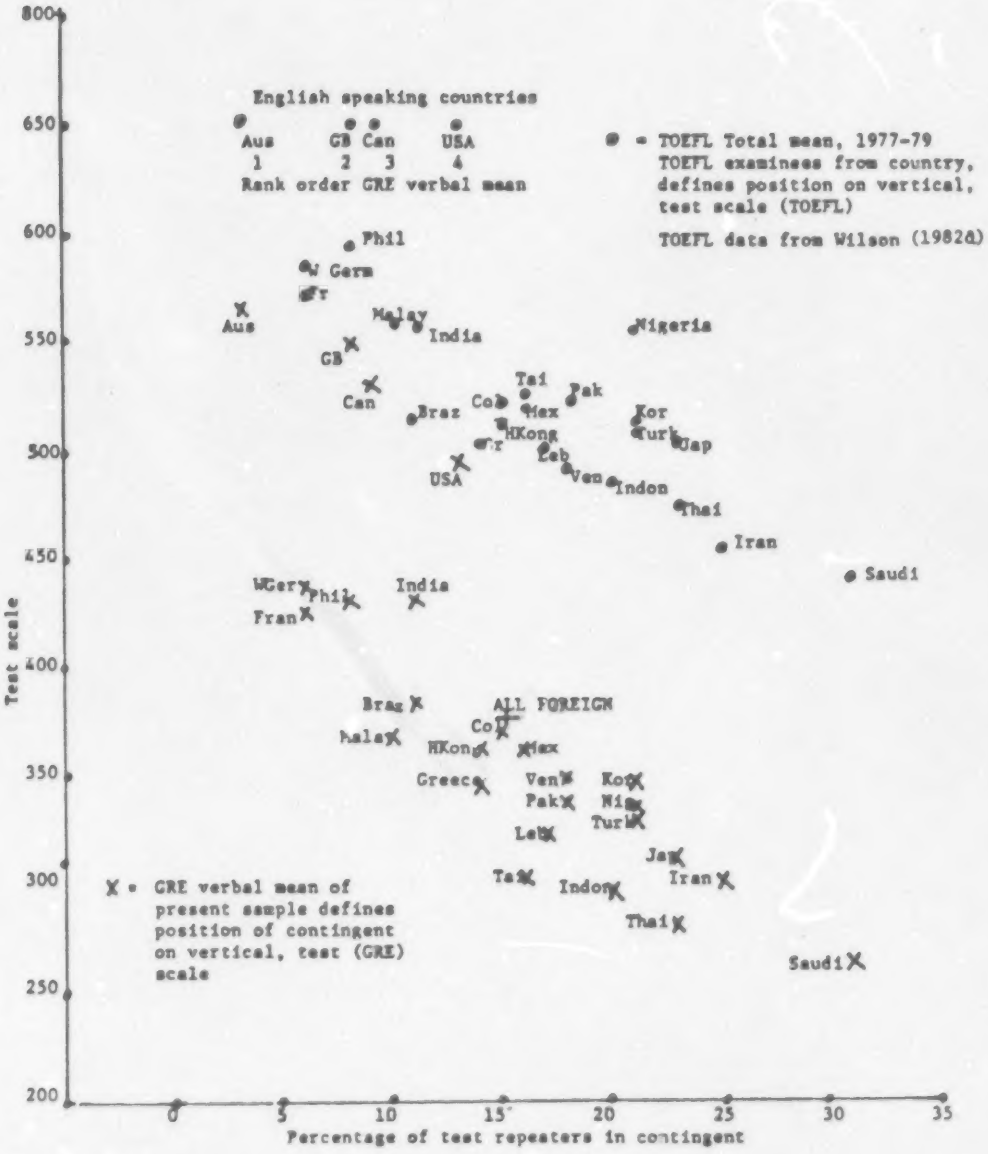

Figure 6.4. Parallel covariation (a) between incidence of repeaters by country and mean GRE verbal scores of all 1981-82 GRE examinees by country and (b) between repeater incidence among 1981-82 GRE examinees and TOEFL Total score means of prospective U.S. graduate students from the same countries who took TOEFL during 1977-79

ship obtains between incidence of test repetition and both (a) the current level of performance of examinees, by country, on the GRE verbal measure and (b) the characteristic level of performance of U.S.-graduate-school-bound nationals from the same countries on TOEFL.

These results reinforce the point made earlier that differences among contingents of foreign examinees in level of performance on the GRE verbal test may be reflecting differences in average levels of proficiency in English, as much as (in addition to) levels of developed verbal reasoning ability, the test construct in samples of U.S. examinees.

GRE Performance in Relation to Test Center Location: U.S. vs Other

In all 25 leading contingents, examinees tested in the United States had lower quantitative means than their fellow nationals tested elsewhere. For some countries, the differences in means between the U.S. center and non-U.S. center examinees was considerable (for example, Australia and India). The selective factors contributing to this rather systematic pattern are not known; a similar pattern was found to obtain for resident aliens and examinees reporting attending a U.S. undergraduate school.

GRE Performance in Relation to Taking or Not Taking a GRE Subject Test

With few exceptions among the leading 25 contingents, examinees who took a GRE Subject Test in addition to the GRE General Test earned higher scores on all three GRE General Test components. This was true for U.S. examinees as well.

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Appendix A

Supplementary Data on the Characteristics of U.S. and Foreign Examinees, 1981-1982

Exhibits

A.1 Sex differences in background characteristics
A.2 Percent female, by discipline
A.3 Mother's education by father's education
A.4 Intended graduate field
A.5 Undergraduate field
A.6 GRE verbal means by major areas and sex
A.7 GRE quantitative means by major areas and sex
A.8 GRE analytical means by major areas and sex
A.9 GRE scores in relation to parental educational attainment levels (U.S. examinees)
A.10 GRE scores in relation to parental educational attainment levels (foreign examinees)
A.11 GRE verbal scores by discipline
A.12 GRE quantitative scores by discipline
A.13 GRE analytical scores by discipline
A.14 Differences in GRE verbal means for citizen and all candidate classifications, by intended graduate field

Note. The tabular summaries of data for the 10 percent sample of U.S. examinees and foreign examinees, repectively, in Exhibits A.1 through A.13 are comparable to those reported in the regular GRE Data Summary Reports (for example, Goodison, 1983). The table numbers correspond to numbers used in the GRE Data Summary Reports series.

Exhibit A.1. Sex differences in background characteristics

TABLE 48
SUMMARY OF BACKGROUND CHARACTERISTICS OF
GRE TEST TAKERS FOR MALE AND FEMALE GROUPS
(PERCENTS WITHIN EACH SEX)

GRE FOREIGN

	MALE	FEMALE	NO RESPONSE	TOTAL
NUMBER OF RESPONSES *	19046	7246	222	26434
% BY ETHNIC GROUP				
AMERICAN INDIAN	0.0	0.0	0.0	0.0
BLACK/AFRO-AMERICAN	0.0	0.0	0.0	0.0
MEXICAN AMERICAN	0.0	0.0	0.0	0.0
ASIAN AMERICAN	0.0	0.0	0.0	0.0
PUERTO RICAN	0.0	0.0	0.0	0.0
OTHER HISPANIC/LATIN AMERICAN	0.0	0.0	0.0	0.0
WHITE	0.0	0.0	0.0	0.0
OTHER	0.0	0.0	0.0	0.0
% ENGLISH BEST LANGUAGE	38.06	41.70	63.52	36.95
% UNDERGRADUATE INSTITUTION <20,000	83.73	80.52	80.89	82.84
% PUBLIC UNDERGRADUATE INSTITUTION	73.70	67.49	73.87	72.06
MEAN YEAR OF RECEIPT OF B.A.	78.26	78.63	77.91	78.36
% IN EACH UNDERGRADUATE MAJOR FIELD:				
HUMANITIES	6.29	10.97	9.01	9.77
SOCIAL SCIENCES	19.06	37.46	28.04	24.15
BIOLOGICAL SCIENCES	31.61	21.00	19.14	24.25
PHYSICAL SCIENCES	41.57	20.27	39.72	30.13
OTHERS AND UNDECIDED	1.47	2.22	3.27	1.69
MEAN AGE	26.58	26.11	27.99	26.46
% DEGREE OBJECTIVE PHD OR BEYOND	46.67	37.84	39.64	44.22
% IN EACH GRADUATE MAJOR FIELD				
HUMANITIES	5.05	11.73	10.20	6.98
SOCIAL SCIENCES	19.15	36.63	27.19	23.98
BIOLOGICAL SCIENCES	10.50	10.47	17.29	12.73
PHYSICAL SCIENCES	56.09	21.29	35.96	46.45
OTHER AND UNDECIDED	9.23	11.88	9.35	9.95

* THESE NUMBERS REPRESENT THE TOTAL NUMBER OF TEST TAKERS. PERCENTS WITHIN MALE AND FEMALE GROUPS ARE CALCULATED BASED ON TOTAL EXAMINEES RESPONDING TO THE BACKGROUND QUESTION

TABLE 48
SUMMARY OF BACKGROUND CHARACTERISTICS OF
GRE TEST TAKERS FOR MALE AND FEMALE GROUPS
(PERCENTS WITHIN EACH SEX)

10% U.S. SAMPLE

	MALE	FEMALE	NO RESPONSE	TOTAL
NUMBER OF RESPONSES *	6619	8650	169	15438
% BY ETHNIC GROUP				
AMERICAN INDIAN	0.78	1.01	1.06	0.92
BLACK/AFRO-AMERICAN	6.63	7.20	5.59	6.10
MEXICAN AMERICAN	1.72	1.23	0.0	1.42
ASIAN AMERICAN	2.25	1.82	0.62	1.99
PUERTO RICAN	.0.96	0.99	0.0	0.96
OTHER HISPANIC/LATIN AMERICAN	0.89	0.82	0.62	0.81
WHITE	86.99	85.48	88.20	86.16
OTHER	1.89	1.45	3.11	1.68
% ENGLISH BEST LANGUAGE	97.78	98.89	98.75	97.96
% UNDERGRADUATE INSTITUTION <20,000	71.89	74.75	75.63	73.37
% PUBLIC UNDERGRADUATE INSTITUTION	63.26	64.29	68.63	64.71
MEAN YEAR OF RECEIPT OF B.A.	78.77	78.38	78.06	78.52
% IN EACH UNDERGRADUATE MAJOR FIELD:				
HUMANITIES	14.21	16.62	18.52	15.62
SOCIAL SCIENCES	48.94	48.39	45.06	48.19
BIOLOGICAL SCIENCES	16.88	15.05	17.98	21.48
PHYSICAL SCIENCES	15.55	6.68	13.58	14.76
OTHERS AND UNDECIDED	2.50	3.25	4.94	2.95
MEAN AGE	26.36	26.98	27.78	26.68
% DEGREE OBJECTIVE PHD OR BEYOND	43.97	32.44	36.29	37.19
% IN EACH GRADUATE MAJOR FIELD				
HUMANITIES	12.95	10.85	10.56	11.73
SOCIAL SCIENCES	37.23	46.86	46.50	42.78
BIOLOGICAL SCIENCES	15.05	21.91	14.91	18.94
PHYSICAL SCIENCES	23.22	5.73	11.80	13.22
OTHER AND UNDECIDED	11.50	14.61	16.13	13.34

* THESE NUMBERS REPRESENT THE TOTAL NUMBER OF TEST TAKERS. PERCENTS WITHIN MALE AND FEMALE GROUPS ARE CALCULATED BASED ON TOTAL EXAMINEES RESPONDING TO THE BACKGROUND QUESTION

Exhibit A.1, concluded

TABLE 40 (CONTINUED)
SUMMARY OF BACKGROUND CHARACTERISTICS OF
GRE TEST TAKERS FOR MALE AND FEMALE GROUPS
(PERCENTS WITHIN EACH SEX)

GRE FOREIGN

		MALE	FEMALE	NO RESPONSE	TOTAL
% IN EACH REGION					
NORTHEAST		3.95	6.31	6.98	4.71
EAST		13.48	19.26	12.79	15.58
MIDWEST		15.35	16.28	15.12	15.65
SOUTH		35.68	29.33	41.86	33.66
WEST		31.54	29.01	23.26	30.40
% WHOSE FATHER'S LEVEL OF ED IS:					
DID NOT GRADUATE FROM H.S.		25.66	19.01	29.33	23.00
HIGH SCHOOL GRADUATE		19.02	17.26	18.75	18.53
BEYOND H.S. BUT NOT COLLEGE		12.69	14.46	15.38	13.20
GRADUATE OF A FOUR-YEAR COLLEGE		16.24	17.97	16.35	16.71
BEYOND COLLEGE BUT NOT GRAD DEG		3.42	4.18	5.77	3.65
GRADUATE OR PROFESSIONAL DEGREE		22.97	27.12	14.42	24.03
% WHOSE MOTHER'S LEVEL OF ED IS:					
DID NOT GRADUATE FROM H.S.		40.41	28.95	46.86	37.33
HIGH SCHOOL GRADUATE		29.73	28.87	24.15	29.45
BEYOND H.S. BUT NOT COLLEGE		12.24	17.68	15.46	13.76
GRADUATE OF A FOUR-YEAR COLLEGE		8.52	11.29	8.78	9.28
BEYOND COLLEGE BUT NOT GRAD DEG		2.12	2.76	1.45	2.28
GRADUATE OR PROFESSIONAL DEGREE		6.98	10.50	3.38	7.91
% WHOSE FAMILY INCOME DURING H.S. IS:					
LESS THAN $6,500		30.20	25.73	38.69	34.90
$6,500-15,000		29.15	31.22	23.12	29.66
$15,000-25,000		19.28	24.35	22.61	20.60
MORE THAN $25,000		13.44	18.69	15.58	14.85
% WITH LOCATION OF H.S. IN:					
LARGE CITY		53.82	52.57	48.33	53.43
SUBURB OF LARGE CITY		14.98	19.46	15.31	16.28
OTHER CITY OR TOWN		25.45	23.54	27.75	24.95
FARMING COMMUNITY		5.76	4.43	8.61	5.42
NUMBER OF RESPONSES *		19006	7206	222	26434
GRE VERBAL	MEAN	370.66	387.28	361.94	375.12
	S.D.	116.14	125.75	121.17	119.12
GRE QUANTITATIVE	MEAN	60 .55	536.67	536.88	589.87
	S.D.	134.93	135.87	151.99	136.48
GRE ANALYTICAL	MEAN	442.56	445.67	390.74	443.91
	S.D.	115.99	114.88	112.04	115.82

* THESE NUMBERS REPRESENT THE TOTAL NUMBER OF TEST TAKERS. PERCENTS WITHIN MALE AND FEMALE GROUPS ARE CALCULATED BASED ON TOTAL EXAMINEES RESPONDING TO THE BACKGROUND QUESTION

TABLE 40 (CONTINUED)
SUMMARY OF BACKGROUND CHARACTERISTICS OF
GRE TEST TAKERS FOR MALE AND FEMALE GROUPS
(PERCENTS WITHIN EACH SEX)

10% U.S. SAMPLE

		MALE	FEMALE	NO RESPONSE	TOTAL
% IN EACH REGION					
NORTHEAST		7.01	6.91	10.63	6.99
EAST		17.22	18.32	20.00	17.87
MIDWEST		22.63	21.41	16.80	21.80
SOUTH		32.83	34.76	34.38	33.07
WEST		20.32	16.60	18.13	18.19
% WHOSE FATHER'S LEVEL OF ED IS:					
DID NOT GRADUATE FROM H.S.		16.67	16.45	19.38	16.57
HIGH SCHOOL GRADUATE		22.19	20.44	18.75	21.16
BEYOND H.S. BUT NOT COLLEGE		17.88	19.57	19.38	18.05
GRADUATE OF A FOUR-YEAR COLLEGE		15.59	15.44	16.88	15.52
BEYOND COLLEGE BUT NOT GRAD DEG		4.83	4.85	5.00	4.84
GRADUATE OR PROFESSIONAL DEGREE		22.83	23.26	20.63	23.05
% WHOSE MOTHER'S LEVEL OF ED IS:					
DID NOT GRADUATE FROM H.S.		11.68	12.47	12.50	12.10
HIGH SCHOOL GRADUATE		34.93	29.38	33.75	31.78
BEYOND H.S. BUT NOT COLLEGE		24.62	27.86	29.38	26.51
GRADUATE OF A FOUR-YEAR COLLEGE		14.56	13.09	15.00	14.10
BEYOND COLLEGE BUT NOT GRAD DEG		4.53	5.41	3.75	5.02
GRADUATE OR PROFESSIONAL DEGREE		9.76	11.00	5.63	10.42
% WHOSE FAMILY INCOME DURING H.S. IS:					
LESS THAN $6,500		7.92	8.62	5.37	8.28
$6,500-15,000		30.02	28.17	35.57	29.04
$15,000-25,000		34.29	32.57	31.54	33.29
MORE THAN $25,000		27.78	30.64	27.52	29.39
% WITH LOCATION OF H.S. IN:					
LARGE CITY		18.69	16.47	16.25	16.36
SUBURB OF LARGE CITY		32.42	31.87	28.75	32.07
OTHER CITY OR TOWN		35.48	35.18	34.38	35.25
FARMING COMMUNITY		15.41	16.54	20.63	16.32
NUMBER OF RESPONSES *		4619	1650	369	15638
GRE VERBAL	MEAN	505.15	495.31	484.91	498.86
	S.D.	112.90	116.20	114.49	114.96
GRE QUANTITATIVE	MEAN	564.36	489.22	508.00	521.23
	S.D.	129.70	123.96	123.00	131.72
GRE ANALYTICAL	MEAN	520.22	516.88	504.38	520.20
	S.D.	124.58	122.54	124.11	123.62

* THESE NUMBERS REPRESENT THE TOTAL NUMBER OF TEST TAKERS. PERCENTS WITHIN MALE AND FEMALE GROUPS ARE CALCULATED BASED ON TOTAL EXAMINEES RESPONDING TO THE BACKGROUND QUESTION

Exhibit A.2. Percent female, by discipline

GRE FOREIGN

TABLE 47
PERCENT FEMALE FOR DISCIPLINES WITHIN MAJOR AREAS

I. HUMANITIES	GRADUATE	UNDER-GRADUATE
A. ARTS		
MUSIC	57.14	60.78
FINE ARTS	53.57	51.43
DRAMA	42.86	38.24
SUBTOTAL: ARTS	52.72	54.79
B. OTHER HUMANITIES		
ITALIAN	100.00	40.00
SPEECH	87.18	100.00
GERMAN	77.42	64.29
FRENCH	75.93	77.14
OTHER FOREIGN LANGUAGES	75.00	70.57
COMPARATIVE LITERATURE	72.73	65.63
ENGLISH	65.36	66.78
FAR EASTERN LANG & LIT	62.50	66.67
ART HISTORY	61.36	66.67
SPANISH	54.24	48.86
LINGUISTICS	53.00	61.11
ARCHAEOLOGY	47.06	70.00
RUSSIAN	44.44	38.10
OTHER HUMANITIES	34.38	60.71
NEAR EASTERN LANG & LIT	33.33	53.33
PHILOSOPHY	29.79	30.07
CLASSICAL LANGUAGES	25.00	32.00
ARCHITECTURE	21.51	21.84
RELIGION	15.99	16.03
SUBTOTAL: OTHER HUMAN.	45.73	53.11
SUBTOTALS: HUMANITIES	46.92	53.31

II. SOCIAL SCIENCES		
A. EDUCATION		
EDUCATIONAL PSYCHOLOGY	66.00	53.49
GUIDANCE	62.82	77.78
EDUCATION	62.15	60.89
EDUCATIONAL ADMIN	41.60	41.67
PHYSICAL EDUCATION	39.09	35.29
SUBTOTAL: EDUCATION	57.31	55.33
B. OTHER SOCIAL SCIENCES		
LIBRARY SCIENCE	79.46	82.14
SOCIAL WORK	73.20	78.31
JOURNALISM	62.76	61.70
COMMUNICATIONS	60.90	51.00
LAW	45.00	32.03
INDUSTRIAL RELATIONS	29.89	32.26
PUBLIC ADMINISTRATION	28.57	27.10
BUSINESS	29.79	30.11
SUBTOTAL: OTH SOCIAL SCI	41.44	39.35

10% U.S. SAMPLE

TABLE 47
PERCENT FEMALE FOR DISCIPLINES WITHIN MAJOR AREAS

I. HUMANITIES	GRADUATE	UNDER-GRADUATE
A. ARTS		
FINE ARTS	59.63	70.05
MUSIC	57.02	59.93
DRAMA	52.73	52.68
SUBTOTAL: ARTS	56.68	61.88
B. OTHER HUMANITIES		
SPEECH	84.16	82.12
ART HISTORY	83.61	86.31
OTHER HUMANITIES	78.57	72.62
SPANISH	78.97	72.29
LINGUISTICS	66.67	83.33
OTHER FOREIGN LANGUAGES	66.67	55.56
ENGLISH	63.53	67.00
FRENCH	62.96	74.19
GERMAN	61.11	67.74
ARCHAEOLOGY	55.56	75.00
RUSSIAN	50.00	66.25
CLASSICAL LANGUAGES	50.00	40.00
FAR EASTERN LANG & LIT	50.00	83.85
COMPARATIVE LITERATURE	42.31	52.38
NEAR EASTERN LANG & LIT	40.00	50.00
ARCHITECTURE	33.57	22.73
PHILOSOPHY	33.33	30.43
RELIGION	29.17	20.17
ITALIAN	0.0	0.0
SUBTOTAL: OTHER HUMAN.	51.48	48.59
SUBTOTALS: HUMANITIES	52.78	48.92

II. SOCIAL SCIENCES		
A. EDUCATION		
EDUCATION	88.16	83.52
EDUCATIONAL PSYCHOLOGY	76.47	85.71
GUIDANCE	74.91	87.16
PHYSICAL EDUCATION	55.31	51.88
EDUCATIONAL ADMIN	48.56	48.88
SUBTOTAL: EDUCATION	72.67	77.82
B. OTHER SOCIAL SCIENCES		
LIBRARY SCIENCE	78.82	91.67
SOCIAL WORK	78.28	81.77
JOURNALISM	68.69	62.82
COMMUNICATIONS	65.33	59.26
INDUSTRIAL RELATIONS	53.54	42.31
PUBLIC ADMINISTRATION	47.69	47.96
LAW	44.81	33.57
BUSINESS	38.68	36.18
SUBTOTAL: OTH SOCIAL SCI	68.48	53.95

GRE FOREIGN

TABLE 47 (CONTINUED)
PERCENT FEMALE FOR DISCIPLINES WITHIN MAJOR AREAS

II. SOCIAL SCIENCES (CONT'D)	GRADUATE	UNDER-GRADUATE
C. BEHAVIORAL SCIENCES		
ANTHROPOLOGY	44.04	43.29
PSYCHOLOGY	43.44	44.07
AMERICAN STUDIES	57.69	43.75
SOCIAL PSYCHOLOGY	55.85	38.77
SOCIOLOGY	49.44	54.79
HISTORY	42.73	48.74
OTHER SOCIAL SCIENCE	41.67	44.08
INTERNATIONAL RELATIONS	38.59	49.25
URBAN DEVELOPMENT	28.36	31.82
ECONOMICS	22.38	25.49
POLITICAL SCIENCE/GOV'T	17.92	26.83
GEOGRAPHY	36.44	25.00
SLAVIC STUDIES	0.0	50.00
SUBTOTAL: BEHAVIORL SCI.	37.98	42.82
SUBTOTALS: SOCIAL SCIENCES	42.04	42.67

III. BIOLOGICAL SCIENCES		
A. BIOSCIENCES		
BIOCHEMISTRY	44.05	42.11
BIOLOGY	43.52	44.04
BOTANY	43.33	51.19
GENETICS	43.24	35.71
MICROBIOLOGY	40.76	45.21
PHYSIOLOGY	37.33	42.86
OTHER BIOLOGICAL SCI.	34.38	37.62
ZOOLOGY	26.89	39.76
BIOPHYSICS	33.01	45.45
SUBTOTAL: BIOSCIENCES	39.58	42.86
B. HEALTH SCIENCES		
NURSING	97.67	96.45
NUTRITION	76.32	81.58
AUDIOLOGY	76.19	72.22
PHYSICAL THERAPY	57.89	45.33
OCCUPATIONAL THERAPY	52.94	72.73
PUBLIC HEALTH	46.67	53.66
PARASITOLOGY	45.00	40.00
HOSPITAL/HEALTH ADMIN	41.94	47.62
BACTERIOLOGY	41.67	50.00
PHARMACOLOGY	36.78	47.06
PATHOLOGY	34.43	43.64
PHARMACY	29.76	34.42
DENTISTRY	26.32	27.78
ANATOMY	23.81	22.22
MEDICINE	17.24	19.42
OSTEOPATHY	0.0	50.00
OPTOMETRY	0.0	0.0
SUBTOTAL: HEALTH SCIENCE	48.21	50.30
C. OTHER APPL BIOLOGICAL SCI		
HOME ECONOMICS	85.71	93.27
VETERINARY MEDICINE	44.04	26.59
ENTOMOLOGY	43.90	36.00
AGRICULTURE	15.79	17.65
FORESTRY	11.11	11.50
SUBTOTAL: OTHER APPL BIO	27.18	26.99
SUBTOTALS: BIOLOGICAL SCIENCES	40.00	40.76

Exhibit A.2, continued

10% U.S. SAMPLE

TABLE 47 (CONTINUED)
PERCENT FEMALE FOR DISCIPLINES WITHIN MAJOR AREAS

II. SOCIAL SCIENCES (CONT'D)	GRADUATE	UNDER-GRADUATE
C. BEHAVIORAL SCIENCES		
ANTHROPOLOGY	70.59	65.63
AMERICAN STUDIES	60.42	66.67
SOCIOLOGY	65.05	68.25
PSYCHOLOGY	63.40	62.20
URBAN DEVELOPMENT	62.37	61.67
SOCIAL PSYCHOLOGY	60.00	70.99
OTHER SOCIAL SCIENCE	56.42	59.92
HISTORY	46.75	47.10
INTERNATIONAL RELATIONS	44.25	48.20
SLAVIC STUDIES	48.00	62.50
POLITICAL SCIENCE/GOV'T	36.21	41.93
ECONOMICS	32.88	37.23
GEOGRAPHY	31.67	32.38
SUBTOTAL: BEHAVIORL SCI.	55.09	55.71
SUBTOTALS: SOCIAL SCIENCES	62.64	61.17

III. BIOLOGICAL SCIENCES		
A. BIOSCIENCES		
GENETICS	68.75	37.50
OTHER BIOLOGICAL SCI.	54.70	69.42
BOTANY	53.57	42.42
MICROBIOLOGY	50.82	51.86
PHYSIOLOGY	47.46	52.63
BIOLOGY	47.37	53.73
ZOOLOGY	44.83	60.38
BIOCHEMISTRY	42.98	41.35
BIOPHYSICS	28.57	0.0
SUBTOTAL: BIOSCIENCES	50.71	52.95
B. HEALTH SCIENCES		
OSTEOPATHY	100.00	100.00
NURSING	95.35	95.49
AUDIOLOGY	75.33	90.91
OCCUPATIONAL THERAPY	92.86	90.48
NUTRITION	92.16	95.58
PHYSICAL THERAPY	74.23	76.74
PUBLIC HEALTH	73.13	58.00
BACTERIOLOGY	71.43	80.00
PATHOLOGY	64.71	93.33
HOSPITAL/HEALTH ADMIN	63.36	64.00
PHARMACOLOGY	62.96	100.00
OPTOMETRY	50.00	50.00
MEDICINE	48.00	60.00
PHARMACY	41.67	44.00
PARASITOLOGY	33.33	0.0
ANATOMY	31.82	9.0
DENTISTRY	3.03	33.33
SUBTOTAL: HEALTH SCIENCE	84.10	87.73
C. OTHER APPL BIOLOGICAL SCI		
HOME ECONOMICS	97.26	98.20
VETERINARY MEDICINE	54.51	57.35
FORESTRY	47.06	33.40
AGRICULTURE	40.14	43.62
ENTOMOLOGY	25.98	27.27
SUBTOTAL: OTHER APPL BIO	54.14	60.59
SUBTOTALS: BIOLOGICAL SCIENCES	69.99	66.52

GRE FOREIGN

TABLE 47 (CONTINUED)
PERCENT FEMALE FOR DISCIPLINES WITHIN MAJOR AREAS

IV. PHYSICAL SCIENCES	GRADUATE	UNDER-GRADUATE
A. ENGINEERING		
CHEMICAL ENGINEERING	8.58	9.21
OTHER ENGINEERING	8.16	6.38
INDUSTRIAL ENGINEERING	8.04	10.22
ELECTRICAL ENGINEERING	4.53	5.02
CIVIL ENGINEERING	4.47	4.07
METALLURGY	3.83	2.48
AERONAUTICAL ENGINEERING	2.48	5.36
MECHANICAL ENGINEERING	2.26	1.77
MINING	0.0	0.0
SUBTOTAL: ENGINEERING	5.17	4.99
B. MATHEMATICAL SCIENCES		
STATISTICS	37.40	41.21
MATHEMATICS	29.55	29.10
APPLIED MATHEMATICS	27.63	23.26
COMPUTER SCIENCE	25.74	24.97
SUBTOTAL: MATH. SCIENCE	29.66	28.21
C. PHYSICAL SCIS.		
CHEMISTRY	26.49	28.12
GEOLOGY	17.01	14.22
ASTRONOMY	14.71	0.0
PHYSICS	14.36	14.54
OTHER PHYSICAL SCIENCES	13.74	10.28
OCEANOGRAPHY	10.20	4.65
SUBTOTAL: PHYSICAL SCI.	19.30	20.09
SUBTOTALS: PHYSICAL SCIENCES	10.50	11.09
V. NOT IN ABOVE	35.75	36.54
VI. UNSPECIFIED	32.20	30.77
VII. TOTAL *	27.49	27.47
VIII. NO RESPONSE	27.87	27.93

* TOTAL INCLUDES RESPONDENTS ONLY

Exhibit A.2, concluded

10% U.S. SAMPLE

TABLE 47 (CONTINUED)
PERCENT FEMALE FOR DISCIPLINES WITHIN MAJOR AREAS

IV. PHYSICAL SCIENCES	GRADUATE	UNDER-GRADUATE
A. ENGINEERING		
OTHER ENGINEERING	25.17	19.01
CIVIL ENGINEERING	23.42	14.63
METALLURGY	22.22	20.00
CHEMICAL ENGINEERING	19.61	24.51
INDUSTRIAL ENGINEERING	17.39	20.59
ELECTRICAL ENGINEERING	11.68	12.55
MECHANICAL ENGINEERING	8.85	9.66
AERONAUTICAL ENGINEERING	7.69	5.88
MINING	0.0	0.0
SUBTOTAL: ENGINEERING	14.06	14.99
B. MATHEMATICAL SCIENCES		
STATISTICS	43.48	41.67
MATHEMATICS	42.59	38.58
APPLIED MATHEMATICS	34.62	35.29
COMPUTER SCIENCE	34.61	28.69
SUBTOTAL: MATH. SCIENCE	36.96	41.22
C. PHYSICAL SCIENCES		
OCEANOGRAPHY	48.00	33.33
ASTRONOMY	33.33	28.57
GEOLOGY	28.45	32.28
CHEMISTRY	26.74	32.96
OTHER PHYSICAL SCIENCES	28.00	28.83
PHYSICS	6.25	18.64
SUBTOTAL: PHYSICAL SCI.	23.78	27.28
SUBTOTALS: PHYSICAL SCIENCES	24.75	25.86
V. NOT IN ABOVE	62.74	63.24
VI. UNSPECIFIED	62.69	100.00
VII. TOTAL *	57.11	57.13
VIII. NO RESPONSE	60.30	59.07

* TOTAL INCLUDES RESPONDENTS ONLY

10% U.S. SAMPLE

Exhibit A.3. Mother's education by father's education

TABLE 26
MOTHER'S EDUCATION (ROWS) BY FATHER'S EDUCATION (COLUMNS)

		LESS THAN H.S.	H.S. GRADUATE	BEYOND H.S.	COLLEGE GRADUATE	BEYOND COLLEGE	GRADUATE DEGREE	TOTAL RESPONSE	NO RESPONSE
LESS THAN H.S.	NI	1147	397	177	80	13	32	1816	7
	ROW %	63.16	21.86	9.74	4.41	0.72	1.76	100.00	0.38
	COL %	48.97	12.49	6.24	2.14	1.79	0.92	12.86	22.58
H.S. GRADUATE	NI	870	1853	1057	494	216	388	4778	10
	ROW %	18.21	38.78	22.12	10.34	4.43	8.12	100.00	0.21
	COL %	34.87	58.31	37.26	21.17	15.93	11.20	33.77	32.26
BEYOND H.S.	NI	342	633	1091	799	248	876	3989	5
	ROW %	8.57	15.87	27.35	20.03	6.22	21.96	100.00	0.13
	COL %	13.71	19.92	38.46	34.23	36.87	25.28	28.53	16.13
COLLEGE GRAD	NI	89	148	268	682	164	833	2134	3
	ROW %	2.76	6.96	11.62	31.96	7.69	39.03	100.00	0.14
	COL %	2.36	4.66	8.76	29.22	22.53	24.04	14.19	9.68
BEYOND COLLEGE	NI	29	49	99	98	101	387	734	2
	ROW %	3.85	6.58	11.96	13.00	13.40	51.33	100.00	0.26
	COL %	1.16	1.54	3.17	4.20	13.87	11.17	5.01	6.45
GRADUATE DEGREE	NI	48	98	174	211	86	949	1566	4
	ROW %	3.07	6.26	11.11	13.47	5.49	60.60	100.00	0.25
	COL %	1.92	3.08	6.13	9.04	11.81	27.39	10.61	12.90
TOTAL RESPONSE	NI	2495	3178	2837	2334	728	3465	15037	31
	ROW %	16.59	21.13	18.87	15.52	4.84	23.04	100.00	0.21
	COL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
NO RESPONSE	NI	1	9	2	3	1	6	22	848
	COL %	0.04	0.28	0.07	0.13	0.14	0.17	0.15	3.58

GRE FOREIGN

TABLE 26
MOTHER'S EDUCATION (ROWS) BY FATHER'S EDUCATION (COLUMNS)

		LESS THAN H.S.	H.S. GRADUATE	BEYOND H.S.	COLLEGE GRADUATE	BEYOND COLLEGE	GRADUATE DEGREE	TOTAL RESPONSE	NO RESPONSE
LESS THAN H.S.	NI	5074	1738	850	382	133	688	9027	14
	ROW %	56.21	19.16	9.42	4.11	1.47	7.62	100.00	0.15
	COL %	67.57	38.38	26.67	13.68	15.15	11.91	37.36	25.00
H.S. GRADUATE	NI	446	2351	1243	1522	248	1311	7113	19
	ROW %	6.27	33.05	17.48	21.40	3.37	18.43	100.00	0.27
	COL %	7.78	52.31	39.00	37.72	27.33	22.69	29.44	33.93
BEYOND H.S.	NI	167	244	879	786	178	1878	3328	7
	ROW %	5.02	7.48	26.17	21.64	5.35	32.42	100.00	0.21
	COL %	2.88	5.47	27.38	19.48	20.27	18.66	13.76	12.50
COLLEGE GRAD	NI	41	76	133	998	147	844	2241	6
	ROW %	1.83	3.39	6.02	44.53	6.56	37.66	100.00	0.27
	COL %	0.73	1.69	4.26	24.73	16.74	14.61	9.27	10.71
BEYOND COLLEGE	NI	21	32	18	42	124	314	551	1
	ROW %	3.81	5.81	3.27	7.62	22.50	56.99	100.00	0.18
	COL %	0.36	0.71	0.56	1.04	14.12	5.44	2.28	1.79
GRADUATE DEGREE	NI	45	89	71	135	56	1542	1908	9
	ROW %	2.36	3.89	3.72	7.08	2.94	80.82	100.00	0.47
	COL %	0.78	1.31	2.23	3.35	6.38	26.69	7.90	16.07
TOTAL RESPONSE	NI	5794	4494	3187	4033	878	5777	24163	56
	ROW %	23.98	18.60	13.19	16.70	3.63	23.91	100.00	0.23
	COL %	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
NO RESPONSE	NI	17	17	25	33	10	71	173	2040
	COL %	0.29	0.38	0.78	0.81	1.13	1.21	0.71	7.72

10% U.S. SAMPLE

TABLE 13
QUESTION K. WHAT IS YOUR INTENDED GRADUATE MAJOR FIELD OF STUDY? A.4

	N	%
EDUCATION	1312	8.44
PSYCHOLOGY	1271	8.37
NURSING	627	4.13
COMPUTER SCI	421	2.77
GUIDANCE/COUNS	369	2.43
ENGLISH	339	2.36
RELIGIOUS STD	333	2.19
EDUC ADMIN	314	2.07
SOCIAL WORK	292	1.92
BUSINESS/CMRCE	288	1.90
PUBLIC ADMIN	265	1.74
GEOLOGY	243	1.60
OTHER BIOL SCI	237	1.56
VET MEDICINE	234	1.54
PHYSICAL ED	229	1.51
MUSIC	228	1.50
HISTORY	223	1.47
ECONOMICS	221	1.46
ELECTRICAL ENG	215	1.42
LIBRARY SCI	204	1.34
COMMUNICATIONS	202	1.33
BIOLOGY	193	1.27
CHEMISTRY	193	1.27
OTHER SOC SCI	182	1.20
INTERNAT REL	175	1.15
POLITICAL SCI	175	1.15
PUBLIC HEALTH	161	1.06
OTHER ENGIN	152	1.00
AGRICULTURE	148	0.97
ARCHITECTURE	140	0.92
EDUC PSYCH	140	0.92
HOSPITAL ADMIN	133	0.88
MICROBIOLOGY	123	0.81
BIOCHEMISTRY	122	0.80
JOURNALISM	121	0.80

	N	%
MECHANICAL ENG	113	0.74
CIVIL ENG	112	0.74
PHYSICS	112	0.74
DRAMATIC ARTS	110	0.72
FINE ARTS	110	0.72
MATHEMATICS	109	0.72
CHEMICAL ENG	104	0.68
SOCIOLOGY	104	0.68
NUTRITION	102	0.67
SPEECH	101	0.67
PHYS THERAPY	100	0.66
INDUSTRIAL REL	100	0.66
URBAN DEVELOP	94	0.62
HOME ECONOMICS	74	0.49
ANTHROPOLOGY	69	0.45
ART HISTORY	64	0.42
GENETICS	64	0.42
LINGUISTICS	63	0.41
AUDIOLOGY	62	0.41
OTHER PHYS SCI	60	0.40
GEOGRAPHY	60	0.40
PHYSIOLOGY	59	0.39
ZOOLOGY	56	0.36
BOTANY	56	0.37
PHILOSOPHY	54	0.36
MEDICINE	50	0.33
INDUSTRIAL ENG	47	0.31
LAW	47	0.31
FORESTRY	43	0.28
OTH HUMANITIES	43	0.28
PHARMACY	36	0.24
PATHOLOGY	34	0.22
DENTISTRY	33	0.22
SPANISH	31	0.20
ARCHAEOLOGY	28	0.18

	N	%
OCCUP THERAPY	28	0.18
PHARMACOLOGY	27	0.18
FRENCH	27	0.18
AERONAUT ENG	26	0.17
COMPARE LIT	26	0.17
APPLIED MATH	26	0.17
OCEANOGRAPHY	25	0.16
ENTOMOLOGY	24	0.16
STATISTICS	23	0.15
ANATOMY	23	0.15
AMER STUDIES	20	0.13
GERMAN	18	0.12
SOCIAL PSYCH	15	0.10
CLASSICAL LANG	14	0.09
ASTRONOMY	12	0.08
RUSSIAN	11	0.07
FAR EAST LANG	10	0.07
METALLURGY	9	0.06
BACTERIOLOGY	7	0.05
BIOPHYSICS	7	0.05
OTHER FOR LANG	6	0.04
PARASITOLOGY	6	0.04
MINING	5	0.03
SLAVIC STUDIES	5	0.03
NEAR EAST LANG	5	0.03
OPTOMETRY	4	0.03
OSTEOPATHY	1	0.01
ITALIAN	0	0.0
NOT IN ABOVE	432	2.84
UNDECIDED	1594	10.50
TOTAL RESPONSE	15187	100.00
NO RESPONSE	451	2.88*

* PERCENTAGE BASED ON TOTAL OF 15638 QUESTIONNAIRE RESPONDENTS

Exhibit A.4. Intended graduate field

GRE FOREIGN

TABLE 13
QUESTION K. WHAT IS YOUR INTENDED GRADUATE MAJOR FIELD OF STUDY?

	N	%
COMPUTER SCI	2453	9.71
ELECTRICAL ENG	1914	7.57
CIVIL ENG	1306	5.17
MECHANICAL ENG	1291	5.11
ECONOMICS	1241	4.91
CHEMICAL ENG	925	3.66
PSYCHOLOGY	881	3.49
OTHER ENGIN	779	3.08
CHEMISTRY	657	2.60
PHYSICS	596	2.36
EDUCATION	583	2.31
INDUSTRIAL ENG	517	2.05
BUSINESS/CMRCE	488	1.93
AGRICULTURE	440	1.74
ARCHITECTURE	376	1.49
POLITICAL SCI	319	1.26
INTERNAT REL	313	1.24
MATHEMATICS	293	1.16
OTHER BIOL SCI	289	1.14
ENGLISH	283	1.12
PUBLIC ADMIN	283	1.12
BIOCHEMISTRY	253	1.00
COMMUNICATIONS	246	0.97
MICROBIOLOGY	240	0.95
PHARMACY	208	0.82
METALLURGY	200	0.79
GEOLOGY	196	0.78
BIOLOGY	195	0.77
LINGUISTICS	186	0.74
SOCIOLOGY	182	0.72
URBAN DEVELOP	178	0.70
PUBLIC HEALTH	166	0.66
AERONAUT ENG	162	0.64
EDUC ADMIN	161	0.64
NUTRITION	149	0.59

	N	%
JOURNALISM	148	0.57
MUSIC	141	0.56
NURSING	132	0.52
OTHER PHYS SCI	131	0.52
STATISTICS	123	0.49
OTHER SOC SCI	120	0.47
DENTISTRY	116	0.46
LIBRARY SCI	114	0.45
RELIGIOUS STD	113	0.45
VET MEDICINE	112	0.44
HISTORY	111	0.44
GENETICS	111	0.44
EDUC PSYCH	101	0.40
SOCIAL WORK	97	0.38
PHILOSOPHY	96	0.38
PHYSICAL ED	91	0.36
PHARMACOLOGY	89	0.35
ANTHROPOLOGY	89	0.35
FINE ARTS	86	0.34
GUIDANCE/COUNS	78	0.31
APPLIED MATH	76	0.30
PHYSIOLOGY	75	0.30
GEOGRAPHY	74	0.29
DRAMATIC ARTS	73	0.29
ZOOLOGY	69	0.27
HOSPITAL ADMIN	62	0.25
FORESTRY	62	0.25
PATHOLOGY	62	0.25
BOTANY	61	0.24
MEDICINE	60	0.24
SPANISH	59	0.23
HOME ECONOMICS	59	0.23
INDUSTRIAL REL	58	0.23
COMPARE LIT	56	0.22
FRENCH	55	0.22

	N	%
OCEANOGRAPHY	49	0.19
ART HISTORY	44	0.17
ENTOMOLOGY	41	0.16
LAW	40	0.16
SPEECH	39	0.15
SOCIAL PSYCH	39	0.15
PHYS THERAPY	38	0.15
ASTRONOMY	34	0.13
OTH HUMANITIES	34	0.13
GERMAN	31	0.12
AUDIOLOGY	31	0.12
MINING	31	0.12
AMER STUDIES	26	0.10
FAR EAST LANG	25	0.10
BIOPHYSICS	22	0.09
ANATOMY	21	0.08
PARASITOLOGY	20	0.08
ARCHAEOLOGY	17	0.07
OCCUP THERAPY	17	0.07
BACTERIOLOGY	12	0.05
RUSSIAN	9	0.04
CLASSICAL LANG	8	0.03
NEAR EAST LANG	6	0.02
OPTOMETRY	5	0.02
OTHER FOR LANG	4	0.02
ITALIAN	3	0.01
SLAVIC STUDIES	2	0.01
OSTEOPATHY	1	0.00
NOT IN ABOVE	419	1.66
UNDECIDED	2096	8.29
TOTAL RESPONSE	25269	100.00
NO RESPONSE	1165	4.41*

10% U.S. SAMPLE

TABLE 1E
QUESTION I. WHAT WAS YOUR UNDERGRADUATE MAJOR FIELD OF STUDY?

A.5

	N	%
PSYCHOLOGY	1612	10.63
EDUCATION	1457	9.60
BIOLOGY	922	6.08
NURSING	736	4.85
ENGLISH	734	4.84
HISTORY	489	3.22
POLITICAL SCI	448	2.95
BUSINESS/COMMERCE	446	2.94
SOCIOLOGY	406	2.68
CHEMISTRY	370	2.44
PHYSICAL ED	348	2.29
MUSIC	298	1.96
ECONOMICS	285	1.88
MATHEMATICS	277	1.83
OTHER SOC SCI	268	1.77
GEOLOGY	257	1.69
ELECTRICAL ENG	249	1.64
OTHER BIOL SCI	244	1.61
AGRICULTURE	244	1.61
SOCIAL WORK	208	1.38
FINE ARTS	200	1.32
RELIGIOUS STD	190	1.25
PHYSICS	188	1.24
COMPUTER SCI	187	1.23
COMMUNICATIONS	186	1.23
HOME ECONOMICS	168	1.11
SPEECH	152	1.00
MECHANICAL ENG	145	0.96
OTHER ENGIN	144	0.95
ZOOLOGY	134	0.88
JOURNALISM	130	0.86
ANTHROPOLOGY	130	0.86
CIVIL ENG	124	0.82
PHILOSOPHY	118	0.78
NUTRITION	113	0.74

	N	%
DRAMATIC ARTS	112	0.74
CHEMICAL ENG	103	0.68
BIOCHEMISTRY	103	0.68
MICROBIOLOGY	96	0.62
ARCHITECTURE	88	0.58
GEOGRAPHY	87	0.57
INTERNAT REL	87	0.57
OTH HUMANITIES	85	0.56
SPANISH	84	0.55
FRENCH	82	0.54
ART HISTORY	74	0.49
VET MEDICINE	68	0.45
FORESTRY	55	0.36
PUBLIC ADMIN	52	0.34
PUBLIC HEALTH	51	0.34
PHARMACY	50	0.33
OTHER PHYS SCI	49	0.32
PHYS THERAPY	45	0.30
URBAN DEVELOP	36	0.24
APPLIED MATH	34	0.22
AERONAUT ENG	34	0.22
INDUSTRIAL ENG	34	0.22
AUDIOLOGY	34	0.22
AMER STUDIES	33	0.22
BOTANY	33	0.22
GERMAN	33	0.22
LAW	29	0.19
CLASSICAL LANG	26	0.17
INDUSTRIAL REL	26	0.17
HOSPITAL ADMIN	26	0.17
MEDICINE	25	0.16
LIBRARY SCI	24	0.16
COMPARE LIT	21	0.14
OCCUP THERAPY	21	0.14
GUIDANCE/COUNS	21	0.14

	N	%
PHYSIOLOGY	19	0.13
SOCIAL PSYCH	19	0.13
OCEANOGRAPHY	18	0.12
LINGUISTICS	18	0.12
RUSSIAN	16	0.11
DENTISTRY	15	0.10
PATHOLOGY	15	0.10
EDUC PSYCH	14	0.09
FAR EAST LANG	13	0.09
ARCHAEOLOGY	13	0.09
STATISTICS	12	0.08
BACTERIOLOGY	12	0.08
ENTOMOLOGY	11	0.07
EDUC ADMIN	10	0.07
OTHER FOR LANG	9	0.06
GENETICS	9	0.06
SLAVIC STUDIES	8	0.05
ASTRONOMY	7	0.05
METALLURGY	5	0.03
BIOPHYSICS	3	0.02
ANATOMY	3	0.02
NEAR EAST LANG	2	0.01
OPTOMETRY	2	0.01
PHARMACOLOGY	2	0.01
MINING	2	0.01
OSTEOPATHY	1	0.01
ITALIAN	1	0.01
PARASITOLOGY	0	0.0
NOT IN ABOVE	446	2.94
UNDECIDED	2	0.01
TOTAL RESPONSE	18170	100.00
NO RESPONSE	468	2.99*

* PERCENTAGE BASED ON TOTAL OF 15430 QUESTIONNAIRE RESPONDENTS

Exhibit A.5. Undergraduate field

GRE FOREIGN

TABLE 1E
QUESTION I. WHAT WAS YOUR UNDERGRADUATE MAJOR FIELD OF STUDY?

	N	%
ELECTRICAL ENG	2573	10.25
MECHANICAL ENG	1760	7.01
CIVIL ENG	1435	5.72
ECONOMICS	1341	5.34
CHEMICAL ENG	1093	4.35
CHEMISTRY	1050	4.18
PSYCHOLOGY	1016	4.05
PHYSICS	945	3.76
ENGLISH	868	3.54
OTHER ENGIN	798	3.18
BUSINESS/COMMERCE	796	3.17
MATHEMATICS	768	3.06
BIOLOGY	746	2.97
COMPUTER SCI	736	2.94
AGRICULTURE	637	2.54
POLITICAL SCI	488	1.94
EDUCATION	412	1.64
ARCHITECTURE	409	1.63
INDUSTRIAL ENG	376	1.50
SOCIOLOGY	301	1.20
PHARMACY	278	1.11
HISTORY	278	1.11
GEOLOGY	222	0.88
BIOCHEMISTRY	212	0.84
METALLURGY	210	0.84
OTHER BIOL SCI	202	0.80
NURSING	171	0.68
AERONAUT ENG	169	0.67
ZOOLOGY	167	0.67
STATISTICS	165	0.66
COMMUNICATIONS	160	0.64
MUSIC	154	0.61
GEOGRAPHY	148	0.59
MICROBIOLOGY	147	0.59
PHILOSOPHY	146	0.58

	N	%
MEDICINE	140	0.56
INTERNAT REL	134	0.53
LAW	129	0.51
DENTISTRY	128	0.51
OTHER SOC SCI	128	0.51
VET MEDICINE	123	0.49
NUTRITION	114	0.45
HOME ECONOMICS	107	0.43
FRENCH	107	0.43
PUBLIC ADMIN	107	0.43
PHYSICAL ED	106	0.42
FINE ARTS	106	0.42
RELIGIOUS STD	101	0.40
OTHER PHYS SCI	98	0.39
JOURNALISM	94	0.37
BOTANY	87	0.35
APPLIED MATH	86	0.34
SOCIAL WORK	84	0.33
ANTHROPOLOGY	79	0.31
LINGUISTICS	72	0.29
SPANISH	72	0.29
URBAN DEVELOP	66	0.26
FORESTRY	63	0.25
OTH HUMANITIES	58	0.23
GERMAN	57	0.23
FAR EAST LANG	56	0.22
LIBRARY SCI	56	0.22
MINING	48	0.18
OCEANOGRAPHY	44	0.18
EDUC PSYCH	43	0.17
PUBLIC HEALTH	42	0.17
DRAMATIC ARTS	34	0.14
ART HISTORY	33	0.13
INDUSTRIAL REL	32	0.13
COMPARE LIT	32	0.13

	N	%
PHYS THERAPY	30	0.12
OTHER FOR LANG	29	0.12
GENETICS	28	0.11
CLASSICAL LANG	25	0.10
ENTOMOLOGY	25	0.10
SPEECH	24	0.10
EDUC ADMIN	24	0.10
HOSPITAL ADMIN	22	0.09
RUSSIAN	21	0.08
AUDIOLOGY	19	0.08
PHARMACOLOGY	17	0.07
AMER STUDIES	16	0.06
NEAR EAST LANG	15	0.06
PHYSIOLOGY	14	0.06
SOCIAL PSYCH	13	0.05
OCCUP THERAPY	12	0.05
ASTRONOMY	11	0.04
PATHOLOGY	11	0.04
ARCHAEOLOGY	10	0.04
BIOPHYSICS	9	0.04
ANATOMY	9	0.04
GUIDANCE/COUNS	9	0.04
BACTERIOLOGY	8	0.03
PARASITOLOGY	5	0.02
ITALIAN	5	0.02
OPTOMETRY	3	0.01
OSTEOPATHY	2	0.01
SLAVIC STUDIES	2	0.01
NOT IN ABOVE	412	1.64
UNDECIDED	13	0.05
TOTAL RESPONSE	25105	100.00
NO RESPONSE	1329	5.03*

GRE FOREIGN

TABLE 52
GRE-V MEAN, S.D. AND NUMBER OF MALE AND FEMALE STUDENTS BY GRADUATE MAJOR AREAS

GRADUATE MAJOR		MALE	FEMALE	NO RESPONSE	TOTAL
ARTS	N	139	155	6	300
	MEAN	399	391	373	394
	S.D.	134	135	96	134
OTHER HUMANITIES	N	775	653	16	1444
	MEAN	401	414	376	406
	S.D.	136	138	102	137
EDUCATION	N	426	572	16	1014
	MEAN	359	369	415	365
	S.D.	113	122	142	119
SOCIAL SCIENCE	N	855	605	11	2471
	MEAN	360	379	341	368
	S.D.	116	120	109	118
BEHAVIORAL SCIENCE	N	2198	1346	31	3573
	MEAN	395	429	400	408
	S.D.	122	127	137	125
BIOLOGICAL SCIENCE	N	791	516	8	1315
	MEAN	393	398	380	394
	S.D.	117	124	86	120
HEALTH	N	698	566	14	1188
	MEAN	366	387	365	376
	S.D.	103	118	102	111
APPLIED BIOLOGY	N	589	198	15	714
	MEAN	360	408	361	371
	S.D.	104	132	96	114
ENGINEERING	N	6787	366	52	7125
	MEAN	362	363	338	362
	S.D.	108	115	101	108
MATH SCIENCE	N	2149	781	15	2945
	MEAN	370	338	315	361
	S.D.	124	102	123	119
PHYSICAL SCIENCE	N	1334	319	10	1663
	MEAN	376	38[illegible]	383	377
	S.D.	115	130	122	118
NOT IN ABOVE	N	266	148	5	419
	MEAN	366	397	318	376
	S.D.	107	130	71	116
UNDECIDED	N	1411	670	15	2096
	MEAN	365	370	371	366
	S.D.	124	119	363	123
NO RESPONSE	N	838	319	[illegible]	1165
	MEAN	354	370	35[illegible]	358
	S.D.	110	119	110	113
TOTAL	N	19006	7206	222	26434
	MEAN	371	387	362	375
	S.D.	116	126	121	119

Exhibit A.6. GRE-V means by major area and sex

10% U.S. SAMPLE

TABLE 52
GRE-V MEAN, S.D. AND NUMBER OF MALE AND FEMALE STUDENTS BY GRADUATE MAJOR AREAS

GRADUATE MAJOR		MALE	FEMALE	NO RESPONSE	TOTAL
ARTS	N	194	253	1	448
	MEAN	512	488	230	498
	S.D.	115	114	0	115
OTHER HUMANITIES	N	639	678	16	1333
	MEAN	532	541	518	536
	S.D.	117	120	104	118
EDUCATION	N	642	1690	32	2364
	MEAN	454	447	448	449
	S.D.	114	109	116	110
SOCIAL SCIENCE	N	596	909	14	1519
	MEAN	484	485	494	484
	S.D.	112	119	106	116
BEHAVIORAL SCIENCE	N	1161	3426	29	4616
	MEAN	514	519	548	517
	S.D.	112	114	94	113
BIOLOGICAL SCIENCE	N	449	462	8	919
	MEAN	517	517	489	517
	S.D.	104	112	90	108
HEALTH	N	283	1139	12	1434
	MEAN	498	489	488	489
	S.D.	104	101	75	102
APPLIED BIOLOGY	N	238	281	4	523
	MEAN	487	488	495	487
	S.D.	98	110	84	105
ENGINEERING	N	616	131	6	753
	MEAN	589	544	488	514
	S.D.	103	114	126	106
MATH SCIENCE	N	366	210	3	579
	MEAN	529	513	583	526
	S.D.	111	121	47	115
PHYSICAL SCIENCE	N	484	151	10	645
	MEAN	529	533	522	523
	S.D.	108	102	69	107
NOT IN ABOVE	N	158	266	8	432
	MEAN	471	471	468	471
	S.D.	104	102	111	103
UNDECIDED	N	588	908	18	1594
	MEAN	514	492	473	500
	S.D.	115	119	110	118
NO RESPONSE	N	175	268	8	451
	MEAN	518	509	436	496
	S.D.	121	118	151	120
TOTAL	N	6419	8858	169	15430
	MEAN	505	493	485	498
	S.D.	113	116	114	115

GRE FOREIGN

TABLE 53
GRE-Q MEAN, S.D. AND NUMBER OF MALE AND FEMALE STUDENTS BY GRADUATE MAJOR AREAS

GRADUATE MAJOR		MALE	FEMALE	NO RESPONSE	TOTAL
ARTS	N	139	155	6	300
	MEAN	512	516	473	513
	S.D.	131	109	95	120
OTHER HUMANITIES	N	775	653	16	1444
	MEAN	540	501	491	522
	S.D.	148	132	146	130
EDUCATION	N	426	372	16	1814
	MEAN	479	479	456	476
	S.D.	145	137	139	140
SOCIAL SCIENCE	N	855	605	11	1471
	MEAN	518	479	432	501
	S.D.	148	139	149	144
BEHAVIORAL SCIENCE	N	2198	1346	31	3575
	MEAN	553	508	486	535
	S.D.	141	126	134	137
BIOLOGICAL SCIENCE	N	791	516	8	1315
	MEAN	567	554	491	561
	S.D.	126	121	120	125
HEALTH	N	608	544	14	1166
	MEAN	550	516	534	534
	S.D.	134	139	146	138
APPLIED BIOLOGY	N	389	298	15	714
	MEAN	523	526	471	522
	S.D.	125	128	133	126
ENGINEERING	N	6707	344	82	7125
	MEAN	657	638	626	655
	S.D.	97	104	112	98
MATH SCIENCE	N	2149	781	15	2945
	MEAN	642	635	648	655
	S.D.	100	97	111	100
PHYSICAL SCIENCE	N	1334	319	10	1663
	MEAN	637	603	590	638
	S.D.	114	113	152	115
NOT IN ABOVE	N	266	148	5	419
	MEAN	562	505	546	542
	S.D.	119	137	83	128
UNDECIDED	N	1411	670	15	2096
	MEAN	604	558	525	586
	S.D.	137	131	108	138
NO RESPONSE	N	838	319	8	1165
	MEAN	604	549	558	589
	S.D.	137	134	83	138
TOTAL	N	19006	7206	222	26434
	MEAN	618	537	536	589
	S.D.	131	136	152	136

Exhibit A.7. GRE-Q means by major area and sex

10% U.S. SAMPLE

TABLE 53
GRE-Q MEAN, S.D. AND NUMBER OF MALE AND FEMALE STUDENTS BY GRADUATE MAJOR AREAS

GRADUATE MAJOR		MALE	FEMALE	NO RESPONSE	TOTAL
ARTS	N	194	253	1	448
	MEAN	530	463	240	491
	S.D.	116	121	0	124
OTHER HUMANITIES	N	639	678	16	1333
	MEAN	542	489	469	514
	S.D.	121	119	135	123
EDUCATION	N	642	1690	32	2364
	MEAN	488	458	448	458
	S.D.	125	113	119	118
SOCIAL SCIENCE	N	596	989	14	1599
	MEAN	509	457	536	478
	S.D.	125	118	76	123
BEHAVIORAL SCIENCE	N	1161	1424	29	2614
	MEAN	538	496	539	516
	S.D.	121	117	115	120
BIOLOGICAL SCIENCE	N	449	462	8	919
	MEAN	588	556	564	572
	S.D.	107	100	103	109
HEALTH	N	283	1139	12	1434
	MEAN	551	491	486	503
	S.D.	118	111	75	114
APPLIED BIOLOGY	N	238	281	4	523
	MEAN	572	531	510	550
	S.D.	103	114	75	111
ENGINEERING	N	646	131	6	783
	MEAN	678	654	623	667
	S.D.	87	97	100	89
MATH SCIENCE	N	[illegible]	218	3	879
	MEAN	659	619	627	641
	S.D.	107	118	45	113
PHYSICAL SCIENCE	N	484	151	10	645
	MEAN	632	590	632	622
	S.D.	106	104	77	106
NOT IN ABOVE	N	158	266	8	432
	MEAN	531	475	479	495
	S.D.	128	115	140	123
UNDECIDED	N	580	988	28	1594
	MEAN	570	500	486	525
	S.D.	131	127	100	132
NO RESPONSE	N	175	268	8	451
	MEAN	561	479	448	510
	S.D.	132	126	140	135
TOTAL	N	6419	8859	269	15630
	MEAN	564	489	509	521
	S.D.	130	124	124	132

Exhibit A.8. GRE-A means by major area and sex

GRE FOREIGN

TABLE 54

GRE-A MEAN, S.D. AND NUMBER OF MALE AND FEMALE STUDENTS BY GRADUATE MAJOR AREAS

GRADUATE MAJOR		MALE	FEMALE	NO RESPONSE	TOTAL
ARTS	N	139	155	6	300
	MEAN	433	453	438	443
	S.D.	121	108	90	114
OTHER HUMANITIES	N	775	653	16	1444
	MEAN	436	444	382	439
	S.D.	116	115	95	116
EDUCATION	N	426	572	16	1014
	MEAN	383	408	404	397
	S.D.	109	109	102	109
SOCIAL SCIENCE	N	855	605	11	1471
	MEAN	407	415	345	410
	S.D.	112	106	58	109
BEHAVIORAL SCIENCE	N	2190	1346	31	3575
	MEAN	435	460	409	444
	S.D.	120	117	115	119
BIOLOGICAL SCIENCE	N	791	516	8	1315
	MEAN	437	454	310	443
	S.D.	117	116	101	117
HEALTH	N	688	316	14	1108
	MEAN	414	434	391	423
	S.D.	114	112	93	114
APPLIED BIOLOGY	N	389	198	15	714
	MEAN	393	456	362	409
	S.D.	113	138	105	123
ENGINEERING	N	6787	366	52	7205
	MEAN	454	478	412	455
	S.D.	109	109	99	109
MATH SCIENCE	N	2149	781	15	2945
	MEAN	471	461	421	468
	S.D.	117	105	128	114
PHYSICAL SCIENCE	N	1334	319	10	1663
	MEAN	455	461	453	456
	S.D.	121	120	137	121
NOT IN ABOVE	N	266	148	5	419
	MEAN	419	441	396	426
	S.D.	100	118	74	107
UNDECIDED	N	1411	570	15	2096
	MEAN	441	442	418	441
	S.D.	121	107	102	117
NO RESPONSE	N	838	319	8	1165
	MEAN	424	433	370	426
	S.D.	113	111	86	112
TOTAL	N	19806	7206	222	26434
	MEAN	443	446	399	443
	S.D.	116	114	112	116

10% U.S. EXAMINEE

TABLE 54

GRE-A MEAN, S.D. AND NUMBER OF MALE AND FEMALE STUDENTS BY GRADUATE MAJOR AREAS

GRADUATE MAJOR		MALE	FEMALE	NO RESPONSE	TOTAL
ARTS	N	194	253	1	448
	MEAN	530	515	230	521
	S.D.	116	122	0	120
OTHER HUMANITIES	N	639	678	16	1333
	MEAN	533	529	473	530
	S.D.	119	126	109	122
EDUCATION	N	642	3690	32	2364
	MEAN	456	466	458	463
	S.D.	110	111	121	113
SOCIAL SCIENCE	N	596	909	14	1519
	MEAN	495	497	535	496
	S.D.	120	117	103	118
BEHAVIORAL SCIENCE	N	1161	1424	29	2614
	MEAN	521	527	536	525
	S.D.	119	119	89	119
BIOLOGICAL SCIENCE	N	449	462	8	919
	MEAN	547	566	539	556
	S.D.	118	120	110	119
HEALTH	N	283	7139	32	3454
	MEAN	510	512	465	511
	S.D.	113	114	75	113
APPLIED BIOLOGY	N	238	281	4	523
	MEAN	533	542	475	537
	S.D.	108	125	91	118
ENGINEERING	N	646	131	6	783
	MEAN	576	618	562	583
	S.D.	116	114	149	117
MATH SCIENCE	N	356	218	3	579
	MEAN	591	589	560	590
	S.D.	120	123	73	126
PHYSICAL SCIENCE	N	484	151	10	645
	MEAN	570	583	570	573
	S.D.	120	113	86	118
NOT IN ABOVE	N	358	266	8	632
	MEAN	489	497	508	494
	S.D.	122	113	167	118
UNDECIDED	N	580	988	16	1594
	MEAN	530	523	521	526
	S.D.	127	124	152	125
NO RESPONSE	N	175	268	8	451
	MEAN	520	507	473	512
	S.D.	120	124	154	123
TOTAL	N	6619	8050	169	15638
	MEAN	528	515	504	520
	S.D.	125	123	124	124

Exhibit A.9. GRE scores in relation to parental educational attainment levels (U.S. examinees)

10% U.S. SAMPLE

TABLE 14
QUESTION U. WHAT WAS THE HIGHEST LEVEL OF EDUCATION ATTAINED BY YOUR FATHER?

	N	%	GRE-V MEAN	GRE-V S.D.	GRE-Q MEAN	GRE-Q S.D.	GRE-A MEAN	GRE-A S.D.
NOT GRADUATE FROM HIGH SCHOOL	2496	16.57	453	118	464	135	462	119
HIGH SCHOOL GRADUATE	3187	21.16	483	110	506	129	507	118
BEYOND HIGH SCH BUT NOT COLLEGE	2819	18.88	496	111	518	126	519	119
GRADUATE OF A FOUR-YEAR COLLEGE	2337	15.52	511	108	549	125	544	119
BEYO D COLL BUT NOT GRAD DEGREE	729	4.84	5.7	107	552	124	548	118
GRADUATE OR PROFESSIONAL DEGREE	3471	23.05	531	112	553	124	557	120
TOTAL RESPONSE	15059	100.00	498	115	522	131	521	124
NO RESPONSE	579	3.70*	498	124	503	141	503	123

* % BASED ON 15638 QUESTIONNAIRE RESPONDENTS

TABLE 15
QUESTION V. WHAT WAS THE HIGHEST LEVEL OF EDUCATION ATTAINED BY YOUR MOTHER?

	N	%	GRE-V MEAN	GRE-V S.D.	GRE-Q MEAN	GRE-Q S.D.	GRE-A MEAN	GRE-A S.D.
NOT GRADUATE FROM HIGH SCHOOL	1823	12.10	447	116	487	135	491	118
HIGH SCHOOL GRADUATE	4758	31.78	487	110	518	129	514	119
BEYOND HIGH SC< BUT NOT COLLEGE	3996	26.51	502	110	526	127	528	119
GRADUATE OF A FOUR-YEAR COLLEGE	2137	14.18	520	113	559	126	544	122
BEYOND COLL BUT NOT GRAD DEGREE	756	5.02	529	111	551	123	554	120
GRADUATE CR PROFESSIONAL DEGREE	1578	10.42	533	117	547	129	553	127
TOTAL RESPONSE	15068	100.00	498	115	522	131	521	124
NO RESPONSE	570	3.64*	503	122	508	139	505	124

* % BASED ON 15638 QUESTIONNAIRE RESPONDENTS

Exhibit A.10. GRE scores in relation to parental educational attainment levels (GRE foreign)

GRE FOREIGN

TABLE 14
QUESTION U. WHAT WAS THE HIGHEST LEVEL OF EDUCATION ATTAINED BY YOUR FATHER?

	N	%	GRE-V MEAN	GRE-V S.D.	GRE-Q MEAN	GRE-Q S.D.	GRE-A MEAN	GRE-A S.D.
NOT GRADUATE FROM HIGH SCHOOL	[illegible]	23.80	357	116	556	141	418	123
HIGH SCHOOL GRADUATE	4811	18.53	386	109	566	137	431	109
BEYOND HIGH SCH BUT NOT COLLEGE	3212	13.29	369	113	593	135	448	110
GRADUATE OF A FOUR-YEAR COLLEGE	4068	16.71	356	110	616	130	448	111
BEYOND COLL BUT NOT GRAD DEGREE	886	3.65	379	118	593	131	484	113
GRADUATE OR PROFESSIONAL DEGREE	5048	24.83	425	131	597	131	472	121
TOTAL RESPONSE	24336	100.00	376	119	589	136	443	115
NO RESPONSE	2098	7.93*	368	117	593	138	439	116

* % BASED ON 26434 QUESTIONNAIRE RESPONDENTS

TABLE 15
QUESTION V. WHAT WAS THE HIGHEST LEVEL OF EDUCATION ATTAINED BY YOUR MOTHER?

	N	%	GRE-V MEAN	GRE-V S.D.	GRE-Q MEAN	GRE-Q S.D.	GRE-A MEAN	GRE-A S.D.
NOT GRADUATE FROM HIGH SCHOOL	9041	37.33	351	104	573	[illegible]	418	106
HIGH SCHOOL GRADUATE	7132	29.45	367	114	600	133	443	111
BEYOND HIGH [illegible] BUT NOT COLLEGE	3332	13.76	401	124	593	133	467	115
GRADUATE OF A FOUR-YEAR COLLEGE	2247	9.28	399	130	605	[illegible]	[illegible]	122
BEYOND COLL BUT NOT GRAD DEGREE	552	2.28	414	132	587	131	464	121
GRADUATE OR PROFESSIONAL DEGREE	1917	7.91	442	137	596	134	485	127
TOTAL RESPONSE	24221	100.00	376	119	589	136	443	115
NO RESPONSE	2213	8.37*	368	117	593	138	439	117

* % BASED ON 26434 QUESTIONNAIRE RESPONDENTS

TABLE 66

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. EXAMINEES

Exhibit A.11.
GRE-Verbal scores,
by discipline

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
I. HUMANITIES						
A. ARTS						
DRAMA	110	519	117	112	514	112
MUSIC	228	496	119	298	498	113
FINE ARTS	112	468	103	299	492	118
SUBTOTAL: ARTS	448	496	118	618	498	116
B. OTHER HUMANITIES						
CLASSICAL LANGUAGES	34	628	115	86	604	104
NEAR EASTERN LANG & LIT	8	686	112	8	688	168
COMPARATIVE LITERATURE	86	589	101	81	596	142
PHILOSOPHY	84	589	108	118	563	121
ENGLISH	189	573	113	734	566	117
LINGUISTICS	63	565	120	18	584	116
OTHER FOREIGN LANGUAGES	6	583	104	9	526	116
ARCHAEOLOGY	20	550	125	13	533	157
ART HISTORY	64	542	98	75	534	89
FAR EASTERN LANG & LIT	18	542	117	13	617	134
RUSSIAN	11	537	133	16	576	186
OTHER HUMANITIES	43	533	121	68	538	116
FRENCH	27	531	123	62	579	112
GERMAN	18	529	98	33	561	119
RELIGION	333	514	111	199	509	132
ARCHITECTURE	148	503	117	68	467	113
SPANISH	31	493	138	84	513	127
SPEECH	101	480	89	132	457	100
ITALIAN	0	0	0	1	600	0
SUBTOTAL: OTHER HUMAN.	1333	534	110	1789	543	121
SUBTOTALS: HUMANITIES	1781	527	119	2369	531	123
II. SOCIAL SCIENCES						
A. EDUCATION						
EDUCATIONAL PSYCHOLOGY	249	474	103	26	446	133
EDUCATIONAL ADMIN	324	484	105	18	428	87
EDUCATION	1312	483	111	1457	441	104
GUIDANCE	369	446	119	21	373	103
PHYSICAL EDUCATION	229	493	99	58	492	82
SUBTOTAL: EDUCATION	2364	469	110	0	437	102

TABLE 66

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
I. HUMANITIES						
A. ARTS						
MUSIC	141	412	144	134	406	147
DRAMA	73	404	119	34	429	119
FINE ARTS	86	357	122	104	36[illegible]	118
SUBTOTAL: ARTS	300	394	134	296	3[illegible]	134
B. OTHER HUMANITIES						
NEAR EASTERN LANG & LIT	6	545	130	15	499	198
CLASSICAL LANGUAGES	8	514	121	23	530	134
ITALIAN	3	500	65	5	388	54
PHILOSOPHY	94	486	134	146	450	148
ARCHAEOLOGY	17	465	15[illegible]	10	391	123
ENGLISH	283	454	149	888	399	13[illegible]
COMPARATIVE LITERATURE	56	430	123	32	428	15[illegible]
GERMAN	31	422	111	57	413	129
ART HISTORY	44	420	150	33	384	144
RELIGION	113	420	147	101	402	134
RUSSIAN	9	406	121	21	498	101
OTHER HUMANITIES	36	397	150	58	420	131
FRENCH	55	396	109	107	416	139
LINGUISTICS	106	386	125	72	401	136
SPEECH	39	385	120	24	425	125
SPANISH	89	369	102	72	368	119
ARCHITECTURE	376	357	107	489	382	107
FAR EASTERN LANG & LIT	25	338	98	56	317	72
OTHER FOREIGN LANGUAGES	4	338	37	79	309	102
SUBTOTAL: OTHER HUMAN.	1444	406	137	2160	393	133
SUBTOTALS: HUMANITIES	1744	404	137	2454	393	134
II. SOCIAL SCIENCES						
A. EDUCATION						
PHYSICAL EDUCATION	91	399	127	196	396	124
GUIDANCE	78	378	104	9	406	130
EDUCATIONAL PSYCHOLOGY	191	372	119	43	316	78
EDUCATION	583	363	124	432	384	115
EDUCATIONAL ADMIN	161	344	100	24	390	78
SUBTOTAL: EDUCATION	1914	365	119	894	358	114

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.11, continued

	GRADUATE			UNDERGRADUATE		
II. SOCIAL SCIENCES (CONT'D)	N	MEAN	S.D.	N	MEAN	S.D.
B. OTHER SOCIAL SCIENCES						
LIBRARY SCIENCE	294	537	123	84	473	121
JOURNALISM	121	533	111	138	515	98
LAW	67	486	126	29	466	118
COMMUNICATIONS	292	481	107	186	479	102
INDUSTRIAL RELATIONS	199	475	101	86	453	91
BUSINESS	288	471	106	646	458	107
PUBLIC ADMINISTRATION	268	468	118	82	448	107
SOCIAL WORK	292	461	114	295	439	102
SUBTOTAL: OTH SOCIAL SCI	1919	484	114	1898	461	107
C. BEHAVIORAL SCIENCES						
ANTHROPOLOGY	69	589	98	139	574	109
INTERNATIONAL RELATIONS	175	558	104	87	558	99
HISTORY	223	549	114	489	542	117
SLAVIC STUDIES	8	540	118	8	564	109
AMERICAN STUDIES	89	533	96	23	546	103
ECONOMICS	821	524	114	288	524	108
PSYCHOLOGY	1271	516	108	1612	503	108
POLITICAL SCIENCE/GOV'T	375	512	119	648	508	110
URBAN DEVELOPMENT	96	497	122	36	496	725
GEOGRAPHY	68	482	95	87	493	491
OTHER SOCIAL SCIENCE	182	478	118	258	467	117
SOCIOLOGY	184	473	121	486	472	114
SOCIAL PSYCHOLOGY	38	432	88	19	485	118
SUBTOTAL: BEHAVORL SCI.	3614	517	113	3908	509	113
SUBTOTALS: SOCIAL SCIENCES	6497	484	117	6834	488	118
III. BIOLOGICAL SCIENCES						
A. BIOSCIENCES						
BIOPHYSICS	7	866	88	3	613	89
BOTANY	86	868	103	23	548	101
BIOCHEMISTRY	222	542	109	103	534	114
ZOOLOGY	58	529	106	134	521	99
BIOLOGY	193	519	100	982	520	106
GENETICS	64	519	102	9	548	98
OTHER BIOLOGICAL SCI.	237	508	104	266	504	102
PHYSIOLOGY	89	493	98	19	507	111
MICROBIOLOGY	123	484	109	96	513	105
SUBTOTAL: BIOSCIENCES	919	517	108	1561	519	106

TABLE 64 (CONTINUED)

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN EXAMINEES

	GRADUATE			UNDERGRADUATE		
II. SOCIAL SCIENCES (CONT'D)	N	MEAN	S.D.	N	MEAN	S.D.
B. OTHER SOCIAL SCIENCES						
LAW	48	429	139	129	345	113
JOURNALISM	243	409	133	96	371	105
COMMUNICATIONS	246	388	110	169	367	105
LIBRARY SCIENCE	114	388	131	86	321	86
SOCIAL WORK	97	366	115	84	362	115
INDUSTRIAL RELATIONS	88	361	112	32	347	124
BUSINESS	488	358	110	796	332	95
PUBLIC ADMINISTRATION	283	334	103	287	314	97
SUBTOTAL: OTH SOCIAL SCI	1471	368	116	1456	349	101
C. BEHAVIORAL SCIENCES						
PSYCHOLOGY	681	458	124	1016	453	125
HISTORY	111	434	151	278	421	151
SOCIAL PSYCHOLOGY	39	424	114	13	426	159
INTERNATIONAL RELATIONS	313	416	138	196	393	106
ANTHROPOLOGY	89	414	142	79	482	142
AMERICAN STUDIES	26	408	127	16	417	134
SLAVIC STUDIES	2	405	15	2	438	100
GEOGRAPHY	76	397	129	148	408	132
OTHER SOCIAL SCIENCE	120	393	127	128	369	115
ECONOMICS	1241	387	115	1341	387	120
SOCIOLOGY	182	387	111	381	369	118
POLITICAL SCIENCE/GOV'T	319	373	111	488	387	120
URBAN DEVELOPMENT	178	366	108	64	323	98
SUBTOTAL: BEHAVORL SCI.	3575	408	125	4810	406	127
SUBTOTALS: SOCIAL SCIENCES	6060	391	124	6862	385	126
III. BIOLOGICAL SCIENCES						
A. BIOSCIENCES						
ZOOLOGY	69	459	152	167	446	135
BIOPHYSICS	22	439	136	9	411	110
PHYSIOLOGY	75	414	118	14	417	135
OTHER BIOLOGICAL SCI.	289	402	119	282	377	104
BIOCHEMISTRY	253	401	122	212	421	127
BIOLOGY	195	393	118	746	384	112
GENETICS	111	375	107	28	418	137
BOTANY	61	374	128	87	385	140
MICROBIOLOGY	249	372	109	347	393	106
SUBTOTAL: BIOSCIENCES	1315	396	120	1632	393	119

TABLE 66 (CONTINUED)

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.11, continued

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
III. BIOLOGICAL SCIENCES (CONT'D)						
B. HEALTH SCIENCES						
OPTOMETRY	6	543	87	2	490	170
PHARMACOLOGY	27	532	100	2	385	65
MEDICINE	80	528	96	25	482	131
DENTISTRY	33	505	82	15	446	76
BACTERIOLOGY	7	500	84	12	489	96
PUBLIC HEALTH	161	499	112	31	462	117
PHYSICAL THERAPY	100	494	104	45	522	98
NURSING	627	493	94	736	492	93
PHARMACY	36	489	105	20	506	85
OCCUPATIONAL THERAPY	28	484	101	21	540	125
PARASITOLOGY	6	482	132	0	0	0
PATHOLOGY	34	479	108	15	443	97
HOSPITAL/HEALTH ADMIN	133	474	100	26	447	93
ANATOMY	23	473	92	3	503	82
NUTRITION	102	463	107	113	458	96
AUDIOLOGY	62	439	102	34	461	102
OSTEOPATHY	1	410	0	1	330	0
SUBTOTAL: HEALTH SCIENCE	1434	489	102	1151	486	109
C. OTHER APPL BIOLOGICAL SCI						
FORESTRY	43	524	100	28	521	90
VETERINARY MEDICINE	134	511	105	60	489	91
ENTOMOLOGY	24	507	75	11	460	73
AGRICULTURE	148	468	98	244	475	97
HOME ECONOMICS	74	424	93	108	430	93
SUBTOTAL: OTHER APPL BIO	823	487	105	846	467	100
SUBTOTALS: BIOLOGICAL SCIENCES	2876	498	105	4258	499	105
IV. PHYSICAL SCIENCES						
A. ENGINEERING						
METALLURGY	9	561	85	5	594	66
AERONAUTICAL ENGINEERING	26	536	90	34	552	87
CIVIL ENGINEERING	112	526	108	124	514	104
MECHANICAL ENGINEERING	113	522	109	148	510	105
CHEMICAL ENGINEERING	104	517	105	103	524	96
OTHER ENGINEERING	152	511	99	144	522	102
ELECTRICAL ENGINEERING	215	507	109	149	517	112
INDUSTRIAL ENGINEERING	47	484	105	34	481	112
MINING	5	462	81	2	500	10
SUBTOTAL: ENGINEERING	783	514	104	840	517	104

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN EXAMINEES

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
III. BIOLOGICAL SCIENCES (CON.'D)						
B. HEALTH SCIENCES						
NURSING	131	415	122	171	401	118
MEDICINE	69	414	112	148	397	118
PHYSICAL THERAPY	38	412	104	38	378	102
AUDIOLOGY	31	392	118	19	376	83
BACTERIOLOGY	12	382	129	8	354	57
OCCUPATIONAL THERAPY	17	381	135	12	425	118
PHARMACOLOGY	89	379	104	17	429	124
OPTOMETRY	5	376	116	3	437	111
PATHOLOGY	62	375	98	11	378	129
PUBLIC HEALTH	166	375	112	42	331	85
DENTISTRY	116	362	109	128	357	105
NUTRITION	149	361	104	114	353	96
HOSPITAL/HEALTH ADMIN	62	359	111	22	315	81
PHARMACY	208	359	102	270	355	95
PARASITOLOGY	28	352	118	8	334	117
ANATOMY	21	342	122	9	360	132
OSTEOPATHY	3	300	0	2	360	170
SUBTOTAL: HEALTH SCIENCE	1108	376	111	1011	371	108
C. OTHER APPL BIOLOGICAL SCI						
VETERINARY MEDICINE	112	475	123	123	379	119
FORESTRY	62	389	136	63	373	130
ENTOMOLOGY	41	381	113	25	346	104
HOME ECONOMICS	89	358	100	107	341	107
AGRICULTURE	448	345	91	637	351	99
SUBTOTAL: OTHER APPL BIO	714	371	114	955	355	106
SUBTOTALS: BIOLOGICAL SCIENCES	3217	382	116	3578	378	114
IV. PHYSICAL SCIENCES						
A. ENGINEERING						
MINING	31	398	89	45	392	101
METALLURGY	280	391	122	210	388	122
CHEMICAL ENGINEERING	925	381	114	1093	383	115
MECHANICAL ENGINEERING	1291	378	114	1760	378	118
AERONAUTICAL ENGINEERING	162	368	107	169	375	111
OTHER ENGINEERING	779	367	107	798	366	112
ELECTRICAL ENGINEERING	1914	364	108	2573	376	117
INDUSTRIAL ENGINEERING	317	356	103	376	334	87
CIVIL ENGINEERING	1374	329	91	1435	329	91
SUBTOTAL: ENGINEERING	7125	362	108	8459	367	113

TABLE 66 (CONTINUED)

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.11, concluded

IV. PHYSICAL SCIENCES (CONT'D)	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
B. MATHEMATICAL SCIENCES						
APPLIED MATHEMATICS	25	534	107	34	533	102
MATHEMATICS	189	527	106	277	525	111
COMPUTER SCIENCE	421	523	110	387	517	116
STATISTICS	23	519	115	32	448	79
SUBTOTAL: MATH. SCIENCE	579	524	110	810	521	112
C. PHYSICAL SCIENCES						
ASTRONOMY	18	577	132	7	541	113
PHYSICS	112	553	97	188	553	1[illegible]
OTHER PHYSICAL SCIENCES	60	531	115	49	527	101
OCEANOGRAPHY	25	528	85	18	496	111
CHEMISTRY	193	517	117	370	519	116
GEOLOGY	243	531	96	297	521	91
SUBTOTAL: PHYSICAL SCI.	645	523	107	889	527	107
SUBTOTALS: PHYSICAL SCIENCES	2987	528	109	2239	522	108
V. NOT IN ABOVE	432	471	103	446	467	112
VI. UNDECIDED	1596	89[illegible]	110	2	430	29
VII. TOTAL *	15187	498	115	15178	498	115
VIII. NO RESPONSE	481	506	120	448	499	121

* TOTAL INCLUDES RESPONDENTS ONLY

[illegible]

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN EXAMINEES

IV. PHYSICAL SCIENCES (CONT'D)	GRADUATE			UNDERGRADUATE		
	[illegible]	MEAN	S.D.	N	MEAN	S.D.
B. MATHEMATICAL SCIENCES						
APPLIED MATHEMATICS	76	388	131	86	349	131
MATHEMATICS	293	375	131	768	375	129
COMPUTER SCIENCE	2453	359	117	738	357	118
STATISTICS	123	354	121	165	340	117
SUBTOTAL: MATH. SCIENCE	2945	361	119	1757	363	123
C. PHYSICAL SCIENCES						
ASTRONOMY	34	430	148	11	393	129
PHYSICS	896	395	125	948	384	126
GEOLOGY	196	391	114	222	384	112
OCEANOGRAPHY	49	378	120	44	344	91
OTHER PHYSICAL SCIENCES	131	368	106	98	352	106
CHEMISTRY	657	357	109	1050	344	111
SUBTOTAL: PHYSICAL SCI.	1663	377	118	2370	373	117
SUBTOTALS: PHYSICAL SCIENCES	11733	364	113	12586	368	115
V. NOT IN ABOVE	419	376	116	412	354	116
VI. UNDECIDED	2096	366	1[illegible]3	13	339	82
VII. TOTAL *	25269	376	119	25105	376	119
VIII. NO RESPONSE	1165	358	113	1329	364	112

TABLE 67

N, MEAN, AND S.D. OF GRE-Q
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.12. GRE-Q scores by discipline

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
I. HUMANITIES						
A. ARTS						
MUSIC	228	497	116	598	493	117
DRAMA	110	498	136	112	482	143
FINE ARTS	110	475	126	298	476	128
SUBTOTAL: ARTS	448	491	124	918	488	125
B. OTHER HUMANITIES						
ARCHITECTURE	148	587	100	88	591	109
RUSSIAN	11	569	114	16	559	129
CLASSICAL LANGUAGES	14	557	78	26	589	106	
LINGUISTICS	63	554	128	18	564	138
FAR EASTERN LANG & LIT	18	548	136	13	574	129
PHILOSOPHY	94	[illegible]	137	118	534	[illegible]
ARCHAEOLOGY	26	[illegible]	104	13	534	112
COMPARATIVE LITERATURE	26	[illegible]	148	21	548	134
RELIGION	333	51	119	199	504	124
NEAR EASTERN LANG & LIT	5	510	78	2	555	105
FRENCH	87	503	118	82	532	114
ENGLISH	359	501	118	734	496	116
GERMAN	18	501	97	33	555	129
OTHER FOREIGN LANGUAGES	6	490	129	9	[illegible]	141
OTHER HUMANITIES	43	486	121	85	505	117
ART HISTORY	64	481	107	74	489	111
SPEECH	101	486	117	152	486	113
SPANISH	31	449	115	84	474	116
ITALIAN	0	0	0	1	750	0
SUBTOTAL: OTHER HUMAN.	1533	514	123	1759	506	122
SUBTOTALS: HUMANITIES	1781	509	124	2369	501	123
II. SOCIAL SCIENCES						
A. EDUCATION						
EDUCATIONAL PSYCHOLOGY	140	463	114	14	418	132
EDUCATIONAL ADMIN	314	457	112	10	419	97
PHYSICAL EDUCATION	229	453	109	348	444	110
EDUCATION	1312	451	120	1487	443	117
GUIDANCE	369	432	120	27	392	130
SUBTOTAL: EDUCATION	2364	459	116	1886	442	116

TABLE 67

N, MEAN, AND S.D. OF GRE-Q
FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN EXAMINEES

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
I. HUMANITIES						
A. ARTS						
DRAMA	73	[illegible]	127	34	491	127
MUSIC	141	532	114	154	521	116
FINE ARTS	86	466	111	106	458	131
SUBTOTAL: ARTS	300	513	120	294	495	126
B. OTHER HUMANITIES						
FAR EASTERN LANG & LIT	25	606	91	86	598	101
PHILOSOPHY	[illegible]	593	137	146	534	143
ARCHITECTURE	376	571	116	409	572	114
NEAR EASTERN LANG & LIT	6	537	115	15	518	148
LINGUISTICS	184	532	131	72	531	121
CLASSICAL LANGUAGES	8	524	98	25	527	128
SPEECH	39	509	126	24	489	132
ENGLISH	283	506	129	668	529	132
ART HISTORY	44	505	134	33	466	129
COMPARATIVE LITERATURE	36	497	145	32	464	148
GERMAN	31	494	103	57	548	100
RELIGION	113	490	142	101	449	132
ARCHAEOLOGY	17	478	129	10	472	110
RUSSIAN	9	469	124	21	550	100
OTHER HUMANITIES	34	469	148	58	492	129
FRENCH	55	452	126	107	497	122
ITALIAN	3	437	54	5	516	98
OTHER FOREIGN LANGUAGES	4	395	92	29	478	137
SPANISH	59	349	116	72	471	152
SUBTOTAL: OTHER HUMAN.	1444	522	138	2160	527	134
SUBTOTALS: HUMANITIES	1744	520	135	2454	523	133
II. SOCIAL SCIENCES						
A. EDUCATION						
EDUCATIONAL PSYCHOLOGY	101	504	134	43	526	137
EDUCATION	583	489	137	412	466	144
PHYSICAL EDUCATION	91	477	132	106	467	124
GUIDANCE	78	458	145	9	487	141
EDUCATIONAL ADMIN	161	424	141	24	416	131
SUBTOTAL: EDUCATION	1014	474	140	594	493	142

TABLE 67 (CONTINUED)

N, MEAN, AND S.D. OF GRE-Q FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.12, continued

	GRADUATE			UNDERGRADUATE		
II. SOCIAL SCIENCES (CONT'D)	N	MEAN	S.D.	N	MEAN	S.D.
B. OTHER SOCIAL SCIENCES						
BUSINESS	880	527	129	946	514	129
JOURNALISM	121	498	102	138	479	103
INDUSTRIAL RELATIONS	100	488	110	86	514	101
LIBRARY SCIENCE	894	474	110	94	484	109
COMMUNICATIONS	282	464	120	286	487	124
LAW	67	466	105	89	433	112
PUBLIC ADMINISTRATION	868	468	127	82	438	127
SOCIAL WORK	292	447	124	295	496	110
SUBTOTAL: OTH SOCIAL SCI	1519	478	123	1890	472	124
C. BEHAVIORAL SCIENCES						
ECONOMICS	821	592	113	885	596	106
INTERNATIONAL RELATIONS	175	541	107	87	541	95
AMERICAN STUDIES	89	538	89	73	548	96
SLAVIC STUDIES	8	534	117	8	589	98
ANTHROPOLOGY	69	512	98	130	516	105
PSYCHOLOGY	1271	512	112	1612	507	114
GEOGRAPHY	60	507	134	67	537	110
POLITICAL SCIENCE/GOV'T	175	504	129	448	497	124
HISTORY	823	499	126	489	501	121
URBAN DEVELOPMENT	94	495	132	36	508	132
OTHER SOCIAL SCIENCE	182	485	120	260	478	129
SOCIOLOGY	184	459	126	496	[illegible]	127
SOCIAL PSYCHOLOGY	38	442	131	19	[illegible]	141
SUBTOTAL: BEHAVORL SCI.	8614	514	120	3908	503	122
SUBTOTALS: SOCIAL SCIENCES	6497	482	123	6884	483	124
III. BIOLOGICAL SCIENCES						
A. BIOSCIENCES						
BIOPHYSICS	7	626	96	3	483	78
BIOCHEMISTRY	122	624	99	103	638	88
BOTANY	84	618	95	33	616	103
GENETICS	64	583	82	9	628	46
BIOLOGY	193	572	116	982	571	109
ZOOLOGY	86	567	92	134	575	87
MICROBIOLOGY	123	552	104	94	573	83
PHYSIOLOGY	89	551	11[illegible]	19	592	109
OTHER BIOLOGICAL SCI.	237	545	[illegible]	244	559	104
SUBTOTAL: BIOSCIENCES	919	572	[illegible]	1363	575	103

N, MEAN, AND S.D. OF GRE-Q FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN EXAMINEES

	GRADUATE			UNDERGRADUATE		
II. SOCIAL SCIENCES (CONT'D)	N	MEAN	S.D.	N	MEAN	S.D.
B. OTHER SOCIAL SCIENCES						
BUSINESS	488	550	136	796	537	146
LIBRARY SCIENCE	114	85	148	86	537	149
JOURNALISM	148	[illegible]99	132	94	509	138
COMMUNICATIONS	246	49[illegible]	136	268	468	146
LAW	48	495	127	129	516	132
SOCIAL WORK	97	476	141	84	473	148
PUBLIC ADMINISTRATION	283	448	145	187	495	136
INDUSTRIAL RELATIONS	36	476	141	32	439	169
SUBTOTAL: OTH SOCIAL SCI	1471	501	144	1458	535	152
C. BEHAVIORAL SCIENCES						
SLAVIC STUDIES	8	485	45	2	395	183
ECONOMICS	1241	565	128	1241	581	128
AMERICAN STUDIES	86	567	92	16	528	129
GEOGRAPHY	76	519	161	148	513	144
PSYCHOLOGY	881	516	124	1016	519	127
OTHER SOCIAL SCIENCE	128	510	138	128	526	138
SOCIOLOGY	182	508	143	301	489	151
HISTORY	111	508	127	278	493	139
SOCIAL PSYCHOLOGY	29	507	132	13	491	148
ANTHROPOLOGY	89	504	132	79	497	129
URBAN DEVELOPMENT	178	503	134	66	509	160
POLITICAL SCIENCE/GOV'T	319	503	147	488	503	144
INTERNATIONAL RELATIONS	313	497	140	134	509	139
SUBTOTAL: BEHAVORL SCI.	3575	535	137	4010	530	139
SUBTOTALS: SOCIAL SCIENCES	6060	517	142	6062	522	143
III. BIOLOGICAL SCIENCES						
A. BIOSCIENCES						
BIOPHYSICS	22	635	127	9	587	80
BIOCHEMISTRY	253	593	126	212	598	121
PHYSIOLOGY	75	579	121	24	547	135
GENETICS	111	576	107	28	587	88
OTHER BIOLOGICAL SCI.	289	567	122	202	581	122
ZOOLOGY	69	552	129	267	539	127
BOTANY	61	537	117	87	564	125
BIOLOGY	195	533	122	746	526	123
MICROBIOLOGY	240	532	128	347	538	126
SUBTOTAL: BIOSCIENCES	1335	561	125	1612	548	126

TABLE 67 (CONTINUED)

N, MEAN, AND S.D. OF GRE-Q
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.12, continued

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
III. BIOLOGICAL SCIENCES (CONT'D)						
B. HEALTH SCIENCES						
ANATOMY	23	589	94	3	560	79
DENTISTRY	33	587	77	15	505	105
PHARMACOLOGY	27	587	115	2	415	125
MEDICINE	58	584	117	25	527	130
OPTOMETRY	4	570	35	2	485	145
PHARMACY	36	548	103	58	544	85
PHYSICAL THERAPY	100	544	104	48	552	86
NUTRITION	102	521	115	113	507	114
BACTERIOLOGY	7	519	110	12	542	101
PUBLIC HEALTH	161	514	127	51	474	121
PATHOLOGY	34	503	127	13	475	117
OCCUPATIONAL THERAPY	28	489	128	21	508	101
HOSPITAL/HEALTH ADMIN	133	487	122	25	456	134
AUDIOLOGY	62	482	97	34	501	83
NURSING	627	477	102	734	475	100
PARASITOLOGY	6	450	70	0	0	0
OSTEOPATHY	1	470	0	1	470	0
SUBTOTAL: HEALTH SCIENCE	1434	503	114	1151	490	107
C. OTHER APPL BIOLOGICAL SCI						
VETERINARY MEDICINE	234	594	88	68	595	88
FORESTRY	43	577	115	55	591	07
ENTOMOLOGY	24	549	82	11	519	76
AGRICULTURE	148	527	107	244	537	105
HOME ECONOMICS	74	439	100	168	449	110
SUBTOTAL: OTHER APPL BIO	523	550	111	546	522	116
SUBTOTALS: BIOLOGICAL SCIENCES	2876	533	116	3238	535	115
IV. PHYSICAL SCIENCES						
A. ENGINEERING						
AERONAUTICAL ENGINEERING	26	687	72	34	677	81
MECHANICAL ENGINEERING	113	681	81	145	680	75
CHEMICAL ENGINEERING	104	676	87	103	687	69
CIVIL ENGINEERING	112	674	77	124	666	87
ELECTRICAL ENGINEERING	215	668	92	249	679	86
OTHER ENGINEERING	152	657	94	144	661	97
METALLURGY	9	657	135	5	684	77
INDUSTRIAL ENGINEERING	47	634	92	34	629	97
MINING	5	544	35	2	630	28
SUBTOTAL: ENGINEERING	793	667	89	860	673	85

TABLE 67 (CONTINUED)

N, MEAN, AND S.D. OF GRE-Q
FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN EXAMINEES

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
III. BIOLOGICAL SCIENCES (CONT'D)						
B. HEALTH SCIENCES						
OSTEOPATHY	1	660	0	2	680	110
OPTOMETRY	5	660	56	3	650	116
MEDICINE	60	592	129	140	608	140
PHARMACY	208	576	117	278	587	118
PHYSICAL THERAPY	36	571	105	30	564	110
DENTISTRY	116	565	132	128	563	133
OCCUPATIONAL THERAPY	17	555	120	12	548	130
PATHOLOGY	62	552	128	11	560	110
PHARMACOLOGY	89	549	133	17	551	111
NUTRITION	149	536	140	114	545	144
BACTERIOLOGY	12	525	125	8	636	99
PUBLIC HEALTH	166	514	141	42	500	164
PARASITOLOGY	20	493	135	5	492	126
ANATOMY	21	484	152	9	511	134
AUDIOLOGY	31	462	134	19	478	119
HOSPITAL/HEALTH ADMIN	62	476	161	22	567	138
NURSING	331	452	117	171	450	126
SUBTOTAL: HEALTH SCIENCE	1184	534	138	1031	544	143
C. OTHER APPL BIOLOGICAL SCI						
FORESTRY	62	588	126	63	629	104
VETERINARY MEDICINE	112	583	99	123	538	121
HOME ECONOMICS	59	526	151	107	524	144
ENTOMOLOGY	41	512	139	25	574	127
AGRICULTURE	440	490	121	637	518	127
SUBTOTAL: OTHER APPL BIO	714	522	126	955	529	130
SUBTOTALS: BIOLOGICAL SCIENCES	3217	542	131	3578	542	132
IV. PHYSICAL SCIENCES						
A. ENGINEERING						
AERONAUTICAL ENGINEERING	162	677	96	169	682	94
CHEMICAL ENGINEERING	925	669	94	1093	668	92
MECHANICAL ENGINEERING	1291	667	93	1768	663	94
ELECTRICAL ENGINEERING	1914	666	93	2573	666	94
MINING	31	661	69	48	674	79
METALLURGY	280	660	97	[illegible]	662	101
INDUSTRIAL ENGINEERING	317	643	107	376	630	110
CIVIL ENGINEERING	1306	632	100	1626	629	102
OTHER ENGINEERING	779	631	104	[illegible]	655	102
SUBTOTAL: ENGINEERING	7128	655	98	8459	657	98

TABLE 67 (CONTINUED)

N, MEAN, AND S.D. OF GRE-Q
FOR DISCIPLINES WITHIN MAJOR AREAS — 10% U.S. SAMPLE

Exhibit A.12, concluded

	GRADUATE			UNDERGRADUATE		
IV. PHYSICAL SCIENCES (CONT'D)	N	MEAN	S.D.	N	MEAN	S.D.
B. MATHEMATICAL SCIENCES						
APPLIED MATHEMATICS	86	702	73	36	677	81
STATISTICS	23	690	86	12	623	129
MATHEMATICS	189	687	108	277	662	100
COMPUTER SCIENCE	421	630	115	187	649	111
SUBTOTAL: MATH. SCIENCE	879	641	113	510	657	104
C. PHYSICAL SCIENCES						
PHYSICS	532	697	83	168	683	93
ASTRONOMY	32	663	77	7	664	76
CHEMISTRY	193	632	108	378	627	105
OTHER PHYSICAL SCIENCES	68	618	128	49	628	114
GEOLOGY	243	604	99	257	591	93
OCEANOGRAPHY	75	593	98	38	616	84
SUBTOTAL: PHYSICAL SCI.	648	622	106	889	626	103
SUBTOTALS: PHYSICAL SCIENCES	2007	645	104	2239	652	99
V. NOT IN ABOVE	432	695	31		693	123
VI. UNDECIDED	1894	525	132	2	468	48
VII. TOTAL *	15187	522	132	15178	522	132
VIII. NO RESPONSE	451	518	135	468	497	135

N, MEAN, AND S.D. OF GRE-Q
FOR DISCIPLINES WITHIN MAJOR AREAS — GRE FOREIGN EXAMINEES

	GRADUATE			UNDERGRADUATE		
IV. PHYSICAL SCIENCES (CONT'D)	N	MEAN	S.D.	N	MEAN	S.D.
B. MATHEMATICAL SCIENCES						
APPLIED MATHEMATICS	76	686	81	86	677	93
MATHEMATICS	293	665	98	768	658	103
COMPUTER SCIENCE	2453	652	108	738	643	106
STATISTICS	123	647	101	145	635	98
SUBTOTAL: MATH. SCIENCE	2945	655	109	1737	651	104
C. PHYSICAL SCIENCES						
PHYSICS	596	673	93	945	663	98
ASTRONOMY	34	669	79	11	678	73
OTHER PHYSICAL SCIENCES	131	643	105	98	648	108
CHEMISTRY	657	611	114	1058	604	116
OCEANOGRAPHY	49	601	117	44	624	114
GEOLOGY	196	557	133	222	551	131
SUBTOTAL: PHYSICAL SCI.	1663	630	115	2378	625	116
SUBTOTALS: PHYSICAL SCIENCES	11733	652	102	12586	650	103
V. NOT IN ABOVE	419	642	128	412	558	148
VI. UNDECIDED	2096	586	138	13	478	122
VII. TOTAL *	25269	589	136	25105	590	136
VIII. NO RESPONSE	1165	589	138	1329	575	139

* TOTAL INCLUDES RESPONDENTS ONLY

TABLE 68

N, MEAN, AND S.D. OF GRE-A
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.13. GRE-A score data by discipline

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
I. HUMANITIES						
A. ARTS						
DRAMA	119	548	126	112	524	119
MUSIC	228	529	119	290	522	118
FINE ARTS	170	498	108	209	494	113
SUBTOTAL: ARTS	448	521	120	619	519	118
B. OTHER HUMANITIES						
PHILOSOPHY	54	575	122	110	535	119
NEAR EASTERN LANG & LIT	5	574	83	2	685	128
LINGUISTICS	45	562	129	16	553	164
COMPARATIVE LITERATURE	86	557	136	21	548	160
ARCHAEOLOGY	28	551	139	13	514	146
CLASSICAL LANGUAGES	14	546	[illegible]	26	589	104
ARCHITECTURE	140	544	124	68	541	121
ENGLISH	389	539	121	734	532	120
RUSSIAN	11	536	122	16	536	130
FAR EASTERN LANG & LIT	18	535	139	13	598	93
OTHER FOREIGN LANGUAGES	4	535	153	9	644	145
GERMAN	18	529	111	33	540	126
FRENCH	87	526	144	82	529	124
OTHER HUMANITIES	43	519	124	65	531	118
RELIGION	333	518	124	190	529	121
ART HISTORY	64	505	114	74	502	111
SPEECH	101	492	118	152	487	118
SPANISH	31	478	141	84	488	129
ITALIAN	0	0	0	1	670	0
SUBTOTAL: OTHER HUMAN.	1333	530	122	1789	527	123
SUBTOTALS: HUMANITIES	1781	536	122	2369	522	122
II. SOCIAL SCIENCES						
A. EDUCATION						
EDUCATIONAL PSYCHOLOGY	148	489	118	14	434	100
EDUCATION	1312	448	116	1457	443	113
GUIDANCE	349	486	112	21	419	110
PHYSICAL EDUCATION	229	486	99	348	482	101
EDUCATIONAL ADMIN	334	448	110	10	419	78
SUBTOTAL: EDUCATION	2364	463	113	1850	449	111

TABLE 68

N, MEAN, AND S.D. OF GRE-A
FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN EXAMINEES

	GRADUATE			UNDERGRADUATE		
HUMANITIES	N	MEAN	S.D.	N	MEAN	S.D.
ARTS						
MUSIC	141	469	122	154	463	122
DRAMA	73	447	96	34	439	108
FINE ARTS	86	398	101	106	396	104
SUBTOTAL: ARTS	300	443	114	294	435	112
B. OTHER HUMANITIES						
NEAR EASTERN LANG & LIT	6	515	67	15	426	130
PHILOSOPHY	96	500	136	146	465	128
CLASSICAL LANGUAGES	8	479	141	25	490	144
GERMAN	31	468	112	57	462	112
ENGLISH	283	455	120	688	431	104
ARCHAEOLOGY	17	454	117	13	458	82
COMPARATIVE LITERATURE	86	447	100	32	416	105
OTHER HUMANITIES	34	442	142	58	449	117
RELIGION	113	438	129	101	419	119
ITALIAN	3	437	37	5	444	87
FAR EASTERN LANG & LIT	25	436	103	84	423	93
SPEECH	39	434	114	84	428	110
ART HISTORY	44	435	108	33	419	109
ARCHITECTURE	376	431	103	489	426	101
LINGUISTICS	186	428	110	72	437	128
FRENCH	55	411	96	107	426	101
RUSSIAN	9	404	101	21	411	106
OTHER FOREIGN LANGUAGES	4	368	43	29	403	103
SPANISH	59	355	90	72	389	103
SUBTOTAL: OTHER HUMAN.	1444	439	116	2160	431	109
SUBTOTALS: HUMANITIES	1744	440	116	2454	432	110
II. SOCIAL SCIENCES						
A. EDUCATION						
PHYSICAL EDUCATION	91	441	123	106	436	118
EDUCATIONAL PSYCHOLOGY	101	401	102	43	394	98
EDUCATION	883	399	108	412	390	101
GUIDANCE	78	397	104	9	439	159
EDUCATIONAL ADMIN	341	363	103	24	363	100
SUBTOTAL: EDUCATION	1014	397	109	594	398	107

TABLE 68 (CONTINUED)

N, MEAN, AND S.D. OF GRE-A
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.13, continued

II. SOCIAL SCIENCES (CONT'D)	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
B. OTHER SOCIAL SCIENCES						
JOURNALISM	121	529	113	130	518	113
BUSINESS	286	510	121	646	498	122
LIBRARY SCIENCE	294	507	117	84	496	112
LAW	47	495	138	29	456	97
COMMUNICATIONS	282	493	110	186	487	122
INDUSTRIAL RELATIONS	100	491	110	86	507	140
PUBLIC ADMINISTRATION	265	482	114	52	462	117
SOCIAL WORK	292	480	113	295	484	109
SUBTOTAL: OTH SOCIAL SCI	1319	496	118	1059	487	120
C. BEHAVIORAL SCIENCES						
ECONOMICS	221	569	123	288	574	122
AMERICAN STUDIES	20	560	97	33	555	111
INTERNATIONAL RELATIONS	178	546	116	87	559	97
SLAVIC STUDIES	5	544	107	8	518	150
ANTHROPOLOGY	69	536	108	138	543	129
HISTORY	223	531	117	489	529	122
POLITICAL SCIENCE/GOV'T	175	527	131	448	512	128
PSYCHOLOGY	[illegible]	522	112	1612	514	114
GEOGRAPHY	68	501	127	87	513	108
OTHER SOCIAL SCIENCE	182	498	125	258	488	123
URBAN DEVELOPMENT	94	498	128	36	490	126
SOCIOLOGY	184	498	129	486	473	128
SOCIAL PSYCHOLOGY	36	437	105	19	500	144
SUBTOTAL: BEHAVORL SCI.	2614	525	119	3908	516	121
SUBTOTALS: SOCIAL SCIENCES	6497	496	120	6854	496	121
III. BIOLOGICAL SCIENCES						
A. BIOSCIENCES						
BIOPHYSICS	7	633	92	3	683	110
BOTANY	84	594	113	33	602	119
GENETICS	44	591	105	9	648	46
BIOCHEMISTRY	122	586	121	103	593	110
ZOOLOGY	58	586	118	134	585	98
OTHER BIOLOGICAL SCI.	237	547	115	244	549	110
PHYSIOLOGY	59	545	110	19	560	115
BIOLOGY	193	542	121	922	552	119
MICROBIOLOGY	173	534	121	96	534	103
SUBTOTAL: BIOSCIENCES	919	554	119	1561	554	116

TABLE 68 (CONTINUED)

N, MEAN, AND S.D. OF GRE-A
FOR DISCIPLINES WITHIN MAJOR AREAS

GRE FOREIGN EXAMINEES

II. SOCIAL SCIENCES (CONT'D)	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
B. OTHER SOCIAL SCIENCES						
LAW	48	446	133	129	489	119
JOURNALISM	145	426	92	94	418	96
BUSINESS	488	424	111	796	408	106
COMMUNICATIONS	246	424	113	169	414	108
LIBRARY SCIENCE	114	407	112	86	401	98
SOCIAL WORK	97	406	91	84	417	106
INDUSTRIAL RELATIONS	58	379	106	32	378	118
PUBLIC ADMINISTRATION	283	369	96	107	362	83
SUBTOTAL: OTH SOCIAL SCI	1471	410	109	1458	405	106
C. BEHAVIORAL SCIENCES						
PSYCHOLOGY	881	479	119	1016	479	119
HISTORY	111	451	131	278	435	126
ECONOMICS	1241	443	117	1341	443	116
GEOGRAPHY	74	443	149	148	438	134
INTERNATIONAL RELATIONS	313	437	121	134	431	111
SOCIAL PSYCHOLOGY	39	435	127	13	418	120
ANTHROPOLOGY	89	429	122	79	452	120
AMERICAN STUDIES	26	427	93	16	523	110
OTHER SOCIAL SCIENCE	120	426	107	128	411	113
SOCIOLOGY	182	415	95	381	401	101
SLAVIC STUDIES	2	415	5	2	245	45
POLITICAL SCIENCE/GOV'T	319	407	108	488	423	115
URBAN DEVELOPMENT	178	404	112	64	392	109
SUBTOTAL: BEHAVORL SCI.	3575	444	119	4010	443	119
SUBTOTALS: SOCIAL SCIENCES	6060	428	117	6062	429	116
III. BIOLOGICAL SCIENCES						
A. BIOSCIENCES						
BIOPHYSICS	22	505	142	9	436	130
PHYSIOLOGY	75	463	118	14	474	140
ZOOLOGY	49	462	137	167	463	133
BIOCHEMISTRY	253	457	122	212	473	125
OTHER BIOLOGICAL SCI.	289	449	116	202	443	106
GENETICS	111	443	108	28	473	126
BIOLOGY	195	434	107	746	430	118
MICROBIOLOGY	248	417	109	147	441	116
BOTANY	61	410	118	87	424	111
SUBTOTAL: BIOSCIENCES	1315	443	117	1612	443	120

TABLE 68 (CONTINUED)

N, MEAN, AND S.D. OF GRE-V
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.13, continued

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
III. BIOLOGICAL SCIENCES (CONT'D)						
B. HEALTH SCIENCES						
PHYSICAL THERAPY	100	549	112	48	554	101
MEDICINE	50	548	121	25	526	111
PHARMACOLOGY	27	546	137	2	425	25
PHARMACY	36	531	121	50	536	110
ANATOMY	23	529	117	3	577	69
NUTRITION	102	528	108	113	529	100
OCCUPATIONAL THERAPY	28	528	130	21	530	110
DENTISTRY	33	528	78	15	478	73
OPTOMETRY	4	525	64	2	469	130
PATHOLOGY	34	515	113	15	506	76
PUBLIC HEALTH	161	508	115	21	487	124
AUDIOLOGY	42	506	109	34	515	97
BACTERIOLOGY	7	504	96	12	466	108
HOSPITAL/HEALTH ADMIN	133	504	113	26	483	107
NURSING	627	499	109	736	498	108
PARASITOLOGY	6	433	88	0	0	0
OSTEOPATHY	1	370	0	1	430	0
SUBTOTAL: HEALTH SCIENCE	1434	511	113	1181	508	109
C. OTHER APPL BIOLOGICAL SCI						
VETERINARY MEDICINE	234	569	112	68	561	105
FORESTRY	43	535	120	25	562	108
ENTOMOLOGY	24	533	109	11	497	81
AGRICULTURE	148	517	111	244	530	114
HOME ECONOMICS	74	449	119	168	464	112
SUBTOTAL: OTHER APPL BIO	523	537	118	544	517	117
SUBTOTALS: BIOLOGICAL SCIENCES	2076	530	118	3258	531	116
IV. PHYSICAL SCIENCES						
A. ENGINEERING						
METALLURGY	9	646	91	5	696	91
AERONAUTICAL ENGINEERING	86	601	111	34	574	112
CHEMICAL ENGINEERING	194	593	116	183	581	113
CIVIL ENGINEERING	112	589	109	124	563	113
OTHER ENGINEERING	132	584	117	144	600	116
MECHANICAL ENGINEERING	113	583	114	145	573	106
INDUSTRIAL ENGINEERING	47	575	113	34	577	149
ELECTRICAL ENGINEERING	215	572	123	249	583	129
MINING	5	444	91	2	483	15
SUBTOTAL: ENGINEERING	793	593	117	849	574	120

GRE FOREIGN EXAMINEES

N, MEAN, AND S.D. OF GRE-A
FOR DISCIPLINES WITHIN MAJOR AREAS

	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
III. BIOLOGICAL SCIENCES (CONT'D)						
B. HEALTH SCIENCES						
OSTEOPATHY	1	520	0	2	445	45
PHYSICAL THERAPY	30	479	116	30	459	117
OPTOMETRY	7	478	116	3	518	136
BACTERIOLOGY	12	450	143	8	388	62
OCCUPATIONAL THERAPY	17	447	124	12	477	135
MEDICINE	60	447	128	140	459	114
DENTISTRY	116	430	101	120	426	101
PATHOLOGY	42	426	114	11	432	110
AUDIOLOGY	31	426	122	19	431	124
NUTRITION	149	425	111	114	428	106
NURSING	131	425	109	171	428	106
PUBLIC HEALTH	144	419	114	42	391	79
PHARMACY	208	417	111	278	422	108
PHARMACOLOGY	89	415	111	17	411	119
ANATOMY	21	398	138	9	379	159
HOSPITAL/HEALTH ADMIN	--	394	98	22	351	78
PARASITOLOGY	20	387	178	5	448	158
SUBTOTAL: HEALTH SCIENCE	1188	423	114	1031	427	110
C. OTHER APPL BIOLOGICAL SCI						
VETERINARY MEDICINE	112	537	137	123	422	128
FORESTRY	62	431	127	63	433	123
ENTOMOLOGY	41	423	118	25	429	104
HOME ECONOMICS	89	395	102	107	401	102
AGRICULTURE	440	376	97	637	390	107
SUBTOTAL: OTHER APPL BIO	714	409	123	955	399	112
SUBTOTALS: BIOLOGICAL SCIENCES	3217	428	118	3578	426	116
IV. PHYSICAL SCIENCES						
A. ENGINEERING						
AERONAUTICAL ENGINEERING	262	469	107	369	476	103
CHEMICAL ENGINEERING	925	468	111	1893	467	111
ELECTRICAL ENGINEERING	1914	467	112	2573	471	114
MINING	31	466	82	45	475	85
MECHANICAL ENGINEERING	1291	460	109	1760	461	111
METALLURGY	200	449	106	210	451	109
INDUSTRIAL ENGINEERING	517	447	105	376	448	107
OTHER ENGINEERING	779	442	108	798	454	108
CIVIL ENGINEERING	1306	430	107	1435	429	103
SUBTOTAL: ENGINEERING	7125	455	109	9459	458	111

TABLE 66 (CONTINUED)

N, MEAN, AND S.D. OF GRE-A
FOR DISCIPLINES WITHIN MAJOR AREAS

10% U.S. SAMPLE

Exhibit A.13, concluded

IV. PHYSICAL SCIENCES (CONT'D)	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
B. MATHEMATICAL SCIENCES						
APPLIED MATHEMATICS	86	611	117	34	613	133
STATISTICS	83	618	99	18	539	124
MATHEMATICS	189	602	121	277	603	119
COMPUTER SCIENCE	421	594	129	187	594	128
SUBTOTAL: MATH. SCIENCE	779	598	124	516	599	124
C. PHYSICAL SCIENCES						
PHYSICS	112	629	111	108	611	117
ASTRONOMY	12	628	126	7	597	179
CHEMISTRY	193	577	116	378	577	121
OTHER PHYSICAL SCIENCES	68	578	125	49	562	111
GEOLOGY	243	547	118	257	585	105
OCEANOGRAPHY	29	532	111	18	544	95
SUBTOTAL: PHYSICAL SCI.	645	575	118	869	576	117
SUBTOTALS: PHYSICAL SCIENCES	2907	582	120	2239	585	120
V. NOT IN ABOVE	432	494	118	646	491	123
VI. UNSPECIFIED	1594	526	125	2	565	15
VII. TOTAL •	15187	528	124	15178	521	124
VIII. NO RESPONSE	451	512	123	448	502	120

GRE FOREIGN EXAMINEES

N, MEAN, AND S.D. OF GRE-A
FOR DISCIPLINES WITHIN MAJOR AREAS

IV. PHYSICAL SCIENCES (CONT'D)	GRADUATE			UNDERGRADUATE		
	N	MEAN	S.D.	N	MEAN	S.D.
B. MATHEMATICAL SCIENCES						
APPLIED MATHEMATICS	76	504	120	84	488	123
MATHEMATICS	293	479	131	768	474	127
COMPUTER SCIENCE	2453	464	112	736	485	110
STATISTICS	123	458	121	169	447	111
SUBTOTAL: MATH. SCIENCE	2945	468	114	3797	476	122
C. PHYSICAL SCIENCES						
ASTRONOMY	34	496	106	11	496	102
PHYSICS	896	483	[illegible]	945	470	124
OTHER PHYSICAL SCIENCES	131	447	109	98	443	113
OCEANOGRAPHY	49	446	119	44	422	86
CHEMISTRY	657	438	113	1038	439	111
GEOLOGY	196	436	126	222	429	119
SUBTOTAL: PHYSICAL SCI.	1663	456	121	2378	458	118
SUBTOTALS: PHYSICAL SCIENCES	11753	458	112	12586	459	114
V. NOT IN ABOVE	419	426	107	412	427	114
VI. UNSPECIFIED	2096	441	117	13	372	73
VII. TOTAL •	25269	444	116	25185	446	116
VIII. NO RESPONSE	1165	426	112	1329	424	114

Exhibit A.14

Differences in GRE Verbal Means for Citizen and All-Candidate Classifications by Intended Graduate Field

	U.S. citizens * (A)			All candidates * (B)			Mean diff. (A-B)	Percent non-citizen
	N	Mean	SD	N	Mean	SD		
Engineering	7197	518	107	10379	468	132	50	30.7
No response	3880	500	125	5250	468	137	32	26.1
Mathematical Sci	4542	535	122	5595	505	139	30	18.8
Biological Sciences	13412	507	117	15862	484	128	23	15.4
Applied Biosciences	6470	485	106	7568	469	114	16	14.5
Other Humanities	16982	544	123	18938	531	131	13	10.3
Physical Sci	7479	533	110	8396	519	120	11	10.9
Undecided	17250	493	123	19019	482	129	11	9.3
Behavioral Science	31281	521	116	34978	512	122	09	10.6
Health	17592	494	104	18851	487	108	07	6.7
Other Social Science	22929	494	116	24468	487	120	07	6.3
Not in above	6231	477	113	6631	473	115	04	6.0
Arts	6282	505	115	6551	503	116	02	4.1
Education	34877	452	110	36196	451	111	01	3.6
Total	196404	499	118	218682	488	124	11	10.2

Note. Fields are listed in descending order in terms of the difference between verbal means of U.S. citizens and the all candidate population which includes non-U.S. citizens.

*Adapted from Wild (1980), for 1978-79 examinees

Appendix B

Exhibit

B.1 Native (or best) languages reported by country of citizenship: GRE General Test candidates, 1981-82

B.2 GRE General Test score means by intended graduate field and country: Countries ordered in terms of percent reporting English as the primary language

Exhibit B-1. **NATIVE (OR BEST) LANGUAGES REPORTED BY COUNTRY OF CITIZENSHIP: GRE GENERAL TEST CANDIDATES, 1981-82**

COUNTRY OF CITIZENSHIP AND REGION	N	INCIDENCE OF LANGUAGE WITHIN A COUNTRY-CONTINGENT (RANK ORDER) FIRST	%	SECOND	%	THIRD	%	FOURTH	%	FIFTH	%
AFRICA-TOTAL	(2173)										
ALGERIA	(101)	FRENCH	43	ARABIC	35	ENGLISH	10	BERBER	9	UNKNOWN	3
ANGOLA	(3)	PORTUGUESE	67	ENGLISH	33						
BOTSWANA	(7)	SETSWANA	86	ENGLISH	14						
CAMEROON	(45)	ENGLISH	69	UNKNOWN	22	FRENCH	9				
CENTR. AFRICAN R.	(3)	ENGLISH	100								
CHAD	(2)	FRENCH	50	ARABIC	50						
CONGO	(3)	UNKNOWN	33	KIKONGO	33	FRENCH	33				
BENIN	(2)	EWE	50	ENGLISH	50						
EGYPT	(176)	ARABIC	78	ENGLISH	18	UNKNOWN	1	ARMENIAN	1	FRENCH	1
ETHIOPIA	(70)	AMHARIC	50	ENGLISH	21	TIGRINYA	21	GALLA	6	UNKNOWN	1
GHANA	(143)	ENGLISH	66	AKAN	15	TWI-FANT	7	EWE	6	GA	4
GUINEA	(2)	MALINKE	50	FRENCH	50						
IVORY COAST	(33)	FRENCH	67	AKAN	18	MALINKE	9	BAMBARA	3	MENDE	3
KENYA	(118)	ENGLISH	64	KIKUYU	12	KISWAHILI	12	LUO	5	UNKNOWN	4
LIBERIA	(50)	ENGLISH	88	UNKNOWN	6	MENDE	4	MALINKE	2		
LIBYA	(48)	ARABIC	85	ENGLISH	8	UNKNOWN	4	AMHARIC	2		
MALAWI	(25)	ENGLISH	56	CHICHEWA	44						
MALI	(20)	ARABIC	50	BAMBARA	20	ENGLISH	15	UNKNOWN	5	FRENCH	5
MOROCCO	(32)	ARABIC	56	FRENCH	28	KISWAHILI	3	UNKNOWN	3	BERBER	3
MOZAMBIQUE	(3)	ENGLISH	67	UNKNOWN	33						
NIGERIA	(883)	ENGLISH	64	IBO	17	YORUBA	9	UNKNOWN	7	EFIK	2
ZIMBABWE	(41)	ENGLISH	71	SHONA	15	YORUBA	10	ZULU	1		
SENEGAL	(6)	WOLOF	50	FRENCH	33	UNKNOWN	17				
SIERRA LEONE	(39)	ENGLISH	51	UNKNOWN	26	MENDE	21	MALINKE	3		
SOMALIA	(14)	SOMALI	71	UNKNOWN	14	ENGLISH	7	ARABIC	7		
SOUTH AFRICA	(112)	ENGLISH	76	AFRIKAANS	16	ZULU	4	UNKNOWN	2	SESOTHO	2
SUDAN	(34)	ARABIC	77	ENGLISH	12	UNKNOWN	6	AMHARIC	3	GREEK	3
SWAZILAND	(22)	GERMAN	50	SISWATI	27	ENGLISH	23				
TANZANIA	(41)	ENGLISH	49	KISWAHILI	37	GUJARATI	7	UNLISTED	5	UNKNOWN	2
TOGO	(5)	EWE	100								
TUNISIA	(19)	ARABIC	68	FRENCH	21	CHINESE	5	ENGLISH	5		
UGANDA	(39)	ENGLISH	39	LUGANDA	31	UNKNOWN	18	UNLISTED	5	LUO	5
UPPER VOLTA	(3)	UNKNOWN	33	ENGLISH	33	FRENCH	33				
ZAMBIA	(29)	ENGLISH	55	UNKNOWN	28	CHICHEWA	10	BEMBA	3	GUJARATI	3
AMERICA-TOTAL	(4297)										
BAHAMAS	(29)	ENGLISH	97	UNKNOWN	3						
BARBADOS	(13)	ENGLISH	100								
BELIZE	(10)	ENGLISH	90	SPANISH	10						
BERMUDA	(11)	ENGLISH	91	UNKNOWN	9						
COSTA RICA	(46)	SPANISH	87	ENGLISH	11	CHINESE	2				
CUBA	(70)	ENGLISH	57	SPANISH	41	UNKNOWN	1				
DOMINICAN REPUBLIC	(36)	SPANISH	92	ENGLISH	6	UNKNOWN	3				
EL SALVADOR	(28)	SPANISH	96	ENGLISH	4						

Exhibit B-1. NATIVE (OR BEST) LANGUAGES REPORTED BY COUNTRY OF CIZITZENSHIP: p. 2 of 4
GRE GENERAL TEST CANDIDATES, 1981-82

COUNTRY OF CITIZENSHIP AND REGION	N	INCIDENCE OF LANGUAGE WITHIN A COUNTRY-CONTINGENT (RANK ORDER)									
		FIRST	%	SECOND	%	THIRD	%	FOURTH	%	FIFTH	%
GUATEMALA	(42)	SPANISH	95	ENGLISH	5						
HAITI	(30)	FRENCH	57	ENGLISH	37	UNKNOWN	7				
HONDURAS	(31)	SPANISH	77	ENGLISH	13	UNKNOWN	7	CHINESE	3		
JAMAICA	(155)	ENGLISH	98	UNKNOWN	1	AKAN	1				
MEXICO	(631)	SPANISH	89	ENGLISH	8	UNKNOWN	3	FRENCH	0		
NETH. ANTILLES	(21)	DUTCH	30	UNKNOWN	33	ENGLISH	29				
NICARAGUA	(37)	SPANISH	87	ENGLISH	8	UNKNOWN	3	ITALIAN	3		
PANAMA	(51)	SPANISH	90	ENGLISH	8	UNKNOWN	2				
PUERTO RICO	(12)	SPANISH	92	ARABIC	8						
TRINIDAD & TOBAGO	(85)	ENGLISH	99	UNKNOWN	1						
WEST INDIES ASSO.	(25)	ENGLISH	100								
CANADA	(1470)	ENGLISH	92	FRENCH	5	UNKNOWN	1	CHINESE	0	GREEK	0
ARGENTINA	(127)	SPANISH	86	ENGLISH	11	UNKNOWN	3				
BOLIVIA	(24)	SPANISH	92	ENGLISH	4	PORTUGUESE	4				
BRAZIL	(294)	PORTUGUESE	89	ENGLISH	7	UNKNOWN	3	SPANISH	1	CHINESE	0
CHILE	(128)	SPANISH	91	ENGLISH	7	UNKNOWN	2	GERMAN	1		
COLOMBIA	(236)	SPANISH	88	ENGLISH	10	UNKNOWN	2	FRENCH	0		
ECUADOR	(45)	SPANISH	91	UNKNOWN	7	ENGLISH	2				
GUYANA	(53)	ENGLISH	98	UNKNOWN	2						
PARAGUAY	(8)	ENGLISH	50	SPANISH	50						
PERU	(130)	SPANISH	87	ENGLISH	9	UNKNOWN	4				
URUGUAY	(23)	SPANISH	91	ENGLISH	9						
VENEZUELA	(396)	SPANISH	92	ENGLISH	5	UNKNOWN	2	FRENCH	0	UKRAINIAN	0
ASIA-TOTAL	(14443)										
AFGHANISTAN	(5)	FARSI	60	UNLISTED	20	PUSHTU	20				
BANGLADESH	(156)	BENGALI	62	ENGLISH	35	UNKNOWN	3	DUTCH	1	URDU	1
BHUTAN	(9)	ENGLISH	67	LUO	22	UNKNOWN	11				
BRUNEI	(2)	UNKNOWN	50	ENGLISH	50						
BURMA	(7)	BURMESE	86	ENGLISH	14						
TAIWAN	(3791)	CHINESE	89	UNLISTED	7	ENGLISH	2	UNKNOWN	1	UNKNOWN	1
HONG KONG	(674)	CHINESE	82	ENGLISH	15	UNKNOWN	3	TIBETAN	0	INDONESIAN	0
INDIA	(4210)	UNLISTED	46	ENGLISH	14	HINDI	8	TAMIL	6	TELUGU	5
INDONESIAN	(275)	INDONESIAN	82	ENGLISH	11	JAVANESE	2	UNKNOWN	2	CHINESE	2
JAPAN	(894)	JAPANESE	83	ENGLISH	5	UNKNOWN	2	KOREAN	2	JAVANESE	2
KAMPUCHEA	(5)	CAMBODIA	40	UNLISTED	20	KOREAN	20	ENGLISH	20		
KOREA	(1547)	KOREAN	87	ENGLISH	10	UNKNOWN	3	JAPANESE	0	KHALKHA	0
LAOS	(8)	LAO	50	ENGLISH	38	CHINESE	13				
MACAO	(50)	ENGLISH	58	MALAY	24	CHINESE	16	UNLISTED	2		
MALAYSIA	(628)	ENGLISH	50	MALAY	36	CHINESE	11	UNKNOWN	2	UNLISTED	1
MAURITIUS	(8)	ENGLISH	38	UNLISTED	25	FRENCH	25	ARABIC	13		
MONGOLIA	(9)	ENGLISH	67	FARSI	33						
NEPAL	(37)	NEPALI	49	ENGLISH	32	UNLISTED	8	UNKNOWN	5	TAMIL	3
PAKISTAN	(266)	URDU	45	ENGLISH	39	THAI	8	PUNJABI	4	UNKNOWN	3

Exhibit B-1. NATIVE (OR BEST) LANGUAGES REPORTED BY COUNTRY OF CIZITZENSHIP: p. 3 of 4
GRE GENERAL TEST CANDIDATES, 1981-82

INCIDENCE OF LANGUAGE WITHIN A COUNTRY-CONTINGENT (RANK ORDER)

COUNTRY OF CITIZENSHIP AND REGION	N	FIRST	%	SECOND	%	THIRD	%	FOURTH	%	FIFTH	%
PHILIPPINES	(467)	ENGLISH	69	TAGALOG	22	UNKNOWN	3	CEBUANO	2	CHINESE	2
SINGAPORE	(150)	ENGLISH	77	CHINESE	21	UNKNOWN	1	GUJARATI	1		
SRI LANKA	(167)	ENGLISH	46	SINHALES	35	TAMIL	15	UNKNOWN	2	UNLISTED	2
THAILAND	(778)	THAI	87	ENGLISH	14	UNKNOWN	2	ARMENIAN	1	CHINESE	0
VIETNAM	(154)	VIETNAMESE	75	ENGLISH	15	CHINESE	5	BULGARIAN	1	UNKNOWN	1
PEOPLES R. OF CHINA	(146)	CHINESE	94	ENGLISH	3	UNKNOWN	2	UNLISTED	1		
EUROPE-TOTAL	(2920)										
TURKEY	(248)	TURKISH	87	ENGLISH	9	GREEK	1	FRENCH	1	UNKNOWN	1
AUSTRIA	(27)	GERMAN	85	ENGLISH	15						
AZORES	(12)	VIETNAMESE	42	ENGLISH	33	PORTUGUESE	17	UNKNOWN	8		
BELGIUM	(75)	FRENCH	49	FLEMISH	23	DUTCH	23	ENGLISH	3	UNKNOWN	1
BULGARIA	(2)	BULGARIAN	100								
CYPRUS	(61)	GREEK	67	ENGLISH	25	TURKISH	3	UNKNOWN	2	ARMENIAN	2
CZECHOSLAVAKIA	(12)	CZECH	75	SLOVAK	8	ARABIC	8	SAMOAN	8		
DENMARK	(27)	DANISH	78	ENGLISH	15	UNKNOWN	4	ARABIC	4		
GREAT BRITAIN	(599)	ENGLISH	92	CHINESE	3	UNKNOWN	2	UNLISTED	1	GUJARATI	1
FINLAND	(35)	FINNISH	80	ENGLISH	9	SERBO-CR.	6	UNKNOWN	3	SWEDISH	3
FRANCE	(297)	FRENCH	91	ENGLISH	5	UNKNOWN	3	FARSI	1	VIETNAMESE	0
FED. R. OF GERMANY	(267)	GERMAN	84	ENGLISH	14	UNKNOWN	1	DUTCH	0	POLISH	0
GERMAN DEM. REP.	(20)	GERMAN	50	ENGLISH	40	UNKNOWN	5	SPANISH	5		
GREECE	(424)	GREEK	93	ENGLISH	6	FRENCH	1	UNKNOWN	0		
HUNGARY	(6)	HUNGARIA	100								
ICELAND	(51)	ICELANDIC	92	UNKNOWN	4	ENGLISH	4				
IRELAND	(100)	ENGLISH	98	UNKNOWN	1	HEBREW	1				
ITALY	(124)	ITALIAN	80	ENGLISH	8	UNKNOWN	5	FRENCH	2	SPANISH	2
LUXEMBOURG	(2)	ENGLISH	100								
MALTA	(3)	ENGLISH	100								
NETHERLANDS	(85)	DUTCH	77	ENGLISH	17	UNKNOWN	5	CHINESE	1	ARMENIAN	1
NORWAY	(47)	NORWEGIA	79	ENGLISH	13	KOREAN	2	FRENCH	2	CATALAN	2
POLAND	(43)	POLISH	91	ENGLISH	9						
PORTUGAL	(49)	PORTUGUESE	88	ENGLISH	2	UNKNOWN	2	CHINESE	2		
ROMANIA	(10)	ROMANIAN	50	ENGLISH	40	UNLISTED	10				
SPAIN	(127)	SPANISH	84	CATALAN	12	ENGLISH	2	BASQUE	1	UNKNOWN	1
SWEDEN	(63)	SWEDISH	78	ENGLISH	14	UNKNOWN	3	LATVIAN	2	SPANISH	2
SWITZERLAND	(55)	GERMAN	56	FRENCH	35	ENGLISH	7	ITALIAN	2		
U. S. S. R.	(8)	RUSSIAN	75	UNKNOWN	13	ARMENIAN	13				
YUGOSLAVIA	(41)	SERBO-CR	85	ENGLISH	7	SLOVENE	5	UNKNOWN	2		

Exhibit B-1. NATIVE (OR BEST) LANGUAGES REPORTED BY COUNTRY OF CIZITZENSHIP: p. 4 of 4
GRE GENERAL TEST CANDIDATES, 1981-82

COUNTRY OF CITIZENSHIP AND REGION	N	INCIDENCE OF LANGUAGE WITHIN A COUNTRY-CONTINGENT (RANK ORDER)									
		FIRST	%	SECOND	%	THIRD	%	FOURTH	%	FIFTH	%
MIDEAST-TOTAL	(2316)										
BAHRAIN	(25)	ARABIC	84	ENGLISH	16						
IRAN	(1119)	FARSI	70	ENGLISH	16	UNKNOWN	7	ARMENIAN	3	FRENCH	1
IRAQ	(92)	ARABIC	69	ENGLISH	21	UNKNOWN	5	FARSI	3	KURDISH	1
ISRAEL	(187)	HEBREW	74	ENGLISH	9	ARABIC	8	UNKNOWN	4	ROMANIAN	2
JORDAN	(192)	ARABIC	81	ENGLISH	16	UNKNOWN	3	LAO	1		
KUWAIT	(66)	ARABIC	79	ENGLISH	17	UNKNOWN	3	UNLISTED	2		
LEBANON	(332)	ARABIC	71	ENGLISH	19	FRENCH	4	ARMENIAN	3	UNKNOWN	2
OMAN	(3)	ARABIC	67	TELUGU	33						
QATAR	(8)	ARABIC	88	ENGLISH	13						
SAUDI	(222)	ARABIC	85	ENGLISH	11	UNKNOWN	3	URDU	1		
SYRIA	(53)	ARABIC	89	ENGLISH	6	ARMENIAN	4	FRENCH	2		
U. ARAB EMIRATES	(14)	ARABIC	57	ENGLISH	43						
YEMEN	(3)	ARABIC	100								
PACIFIC-TOTAL	(306)										
AMERICAN SAMOA	(8)	ARABIC	50	UNKNOWN	25	ENGLISH	25				
AUSTRALIA	(210)	ENGLISH	95	FARSI	2	CHINESE	1	URDU	1	UNKNOWN	1
CAROLINE ISLANDS	(3)	TRUKESE	67	SOMALI	33						
FIJI ISLANDS	(17)	ENGLISH	71	ARABIC	18	UNKNOWN	6	FIJIAN	6		
MARIANA ISLANDS	(3)	ENGLISH	100								
NEW CALEDONIA	(3)	ENGLISH	67	ZHUARG	33						
NEW ZEALAND	(55)	ENGLISH	100								
SOLOMON ISLANDS	(2)	SPANISH	100								
TONGA	(5)	SWEDISH	40	TONGAN	40	UNKNOWN	20				
ALL NON-U. S.	(26455)										
U. S. CITIZENS	(15638)	ENGLISH	96	UNKNOWN	3	SPANISH	1	CHINESE	0	VIETNAMESE	0

NOTE. "Unknown" indicates no response to the question on language.
A "0" entry indicates less than .05 percent.

Exhibit B.2. GRE General Test Score means by Intended Graduate Field and Country: Countries ordered in terms of percent Reporting English as the Primary Language

COUNTRY	ALL EXAMINEES N	TOEFL TOTAL MEAN	EPL %	ARTS AND HUMANITIES V	Q	A	SOCIAL SCIENCES V	Q	A	BIOLOGICAL SCIENCES V	Q	A	PHYSICAL SCIENCES V	Q	A
BAHAMAS	(29)	##	100	300	230	360	361	339	354	358	367	372	##	##	##
BARBADOS	(13)	582	100	##	##	##	497	373	372	387	443	377	590	620	550
BERMUDA	(11)	##	100	430	330	420	386	393	306	600	720	770	##	##	##
GUYANA	(53)	581	100	417	420	357	419	407	379	392	451	364	429	638	454
NEW ZEALAND	(55)	#	100	637	596	573	618	574	574	609	603	586	579	725	607
TRINIDAD	(65)	547	100	423	427	420	451	453	425	440	497	418	449	631	486
WEST INDIES	(25)	##	100	400	543	420	309	466	375	356	423	359	423	480	300
IRELAND	(100)	553	98	503	443	468	509	513	469	517	540	523	569	711	574
JAMAICA	(155)	567	90	368	342	400	429	437	409	403	446	389	418	566	417
U. S. A.	(156730)	#	90	527	509	528	485	483	496	498	533	530	520	645	582
AUSTRALIA	(210)	#	95	595	589	551	562	589	522	502	560	539	557	714	604
GREAT BRITAIN	(599)	#	94	616	569	572	570	558	549	523	579	545	506	660	549
CANADA	(1470)	#	93	550	545	538	526	546	529	533	590	568	542	708	590
BELIZE	(10)	464	90	##	##	##	310	405	300	427	520	395	##	##	##
LIBERIA	(50)	552	90	200	310	370	308	339	327	300	418	346	335	465	339
SINGAPORE	(150)	567	78	501	600	473	433	542	443	447	590	479	419	687	510
SOUTH AFRICA	(112)	616	77	492	473	469	400	467	469	466	522	493	495	650	516
FIJI	(17)	511	75	440	478	415	397	323	370	470	545	385	385	545	380
CAMEROON	(45)	531	71	350	360	390	354	400	353	364	430	351	346	497	384
INDIA	(4210)	556	71	453	488	424	465	521	448	488	538	422	429	656	469
ZIMBABWE	(41)	586	71	400	433	420	373	377	334	378	446	361	440	598	490
PHILIPPINES	(467)	594	70	434	437	410	436	447	426	423	462	416	440	605	487
GHANA	(143)	585	66	433	438	323	388	436	367	386	502	381	409	574	425
KENYA	(118)	570	66	378	430	323	354	418	358	348	478	351	367	595	432
NIGERIA	(883)	553	66	324	380	328	326	358	329	342	410	333	350	520	357
ZAMBIA	(29)	573	62	270	500	330	333	405	366	313	428	320	338	477	387
MACAO	(50)	495	60	440	310	340	345	467	421	388	515	403	350	627	410
CUBA	(70)	573	50	394	421	406	410	398	404	506	532	526	431	500	505
TANZANIA	(41)	561	57	##	##	##	280	315	339	370	400	413	399	657	467
MALAWI	(25)	539	56	320	510	400	##	##	##	400	513	420	327	587	387
MALAYSIA	(628)	559	52	391	467	409	355	481	373	377	556	417	375	626	453
UGANDA	(39)	575	50	290	300	300	329	412	336	360	473	369	303	647	432
NEPAL	(37)	522	49	450	460	360	360	532	417	294	450	359	375	600	399
SIERRA LEONE	(39)	556	49	##	##	##	361	364	346	372	463	373	336	520	385
SRI LANKA	(167)	##	49	493	507	487	429	492	437	389	551	435	387	691	494
U. ARAB EMIRATES	(14)	447	46	##	##	##	457	545	463	770	690	800	355	570	465
ROMANIA	(10)	559	44	300	300	300	410	433	357	##	##	##	400	677	557
GERMAN DEM. REPUB.	(20)	##	40	445	470	425	523	538	510	385	493	408	455	625	490
PAKISTAN	(266)	524	40	450	550	496	349	459	368	338	446	360	335	500	407
HAITI	(30)	498	37	365	475	415	361	385	330	388	402	364	353	507	413

†DATA FOR GRADUATE-DEGREE PLANNING TOEFL EXAMINEES, 1977-1979 (WILSON, 1982A); NOT APPLICABLE FOR AUSTRALIA, GREAT BRITAIN, CANADA, NEW ZEALAND OR THE UNITED STATES.

##INDICATES NO CASES FOR THE PARTICULAR COUNTRY (SEE ABOVE NOTE) OR FIELD SPECIFIED.

NOTE: See Table 6 for percentages of examinees in the four broad areas for the 25 leading countries only.

Exhibit B,2, continued

COUNTRY	ALL EXAMINEES N	TOEFL TOTAL MEAN	EFL %	ARTS AND HUMANITIES V	Q	A	SOCIAL SCIENCES V	Q	A	BIOLOGICAL SCIENCES V	Q	A	PHYSICAL SCIENCES V	Q	A
AZORES	(12)	507	36	335	410	350	475	500	515	**	**	**	320	650	442
BANGLADESH	(156)	509	36	458	538	456	397	530	403	361	560	359	353	603	394
NETH. ANTILLES	(21)	552	29	**	**	**	387	449	445	420	390	337	400	630	457
CYPRUS	(61)	499	25	357	380	373	362	538	439	353	480	417	304	665	464
SWAZILAND	(22)	504	23	550	650	510	437	517	497	318	360	310	343	601	446
ETHIOPIA	(70)	536	22	630	460	530	324	403	343	325	451	347	358	543	403
IRAQ	(92)	454	22	273	500	440	263	415	353	295	476	353	309	557	384
EGYPT	(176)	470	19	266	340	319	301	473	378	286	502	368	296	593	411
LEBANON	(332)	501	19	351	512	383	340	492	402	366	528	450	311	597	442
KUWAIT	(66)	448	18	345	535	325	254	373	340	267	433	345	295	583	404
IRAN	(1119)	456	17	321	498	379	306	463	380	312	481	375	300	591	416
NETHERLANDS	(85)	601	17	459	563	531	460	560	521	458	614	542	455	609	589
BAHRAIN	(25)	474	16	210	530	400	280	436	358	305	360	370	286	515	333
JORDAN	(192)	466	16	333	400	415	292	450	345	289	472	370	308	595	417
AUSTRIA	(27)	503	15	393	489	440	440	440	443	390	420	360	391	655	473
DENMARK	(27)	594	15	350	570	480	400	551	485	402	622	448	506	668	524
HONG KONG	(674)	505	15	393	598	483	375	626	484	308	556	505	351	700	510
ITALY	(20)	428	15	360	400	380	303	430	290	330	408	390	316	591	432
SWEDEN	(63)	554	15	492	476	492	438	534	507	418	574	498	426	609	576
TAIWAN	(3791)	514	15	310	631	441	308	644	434	315	685	462	300	703	462
VIETNAM	(154)	505	15	310	496	366	307	460	346	354	576	414	323	616	424
FED. RP. GERMANY	(267)	583	14	457	492	480	447	571	512	478	618	532	407	675	540
THAILAND	(778)	472	14	296	490	368	280	484	355	296	500	395	281	624	464
HONDURAS	(31)	505	13	423	530	468	338	366	363	342	306	342	390	516	428
NORWAY	(47)	576	13	422	470	478	439	591	517	300	510	450	301	653	507
SUDAN	(34)	479	13	280	340	410	309	447	329	305	553	410	281	601	388
INDONESIA	(275)	477	12	284	476	348	291	495	358	305	553	372	364	630	432
SAUDI ARABIA	(222)	443	12	264	468	361	251	304	326	266	411	320	268	542	365
ARGENTINA	(127)	552	11	390	391	395	436	508	437	443	538	449	432	652	488
COSTA RICA	(46)	524	11	410	400	360	383	450	389	403	473	429	386	621	463
ALGERIA	(101)	505	10	283	593	370	311	416	330	340	710	440	310	566	381
COLOMBIA	(236)	511	10	360	320	335	373	455	401	374	477	413	376	612	442
KOREA	(1547)	513	10	350	601	411	364	655	433	346	651	410	335	696	436
PERU	(130)	510	10	366	433	372	365	493	416	393	439	396	306	663	483
FINLAND	(35)	502	9	300	537	527	485	549	482	440	609	489	436	706	534
ISRAEL	(187)	543	9	331	515	428	345	535	419	359	561	454	346	602	491
LIBYA	(48)	448	9	267	383	300	267	343	325	248	468	243	265	461	350
POLAND	(43)	535	9	372	437	419	397	596	456	332	575	442	401	636	485
TURKEY	(248)	510	9	385	530	478	362	547	448	363	537	455	322	648	457
URUGUAY	(23)	550	9	345	330	390	431	576	466	452	528	477	553	702	593
ITALY	(124)	552	8	491	467	426	471	571	487	518	563	541	477	657	511

Exhibit B,2, concluded

COUNTRY	ALL EXAMINEES N	TOEFL TOTAL MEAN	EPL %	ARTS AND HUMANITIES V	Q	A	SOCIAL SCIENCES V	Q	A	BIOLOGICAL SCIENCES V	Q	A	PHYSICAL SCIENCES V	Q	A
MEXICO	(631)	521	8	370	393	373	364	450	387	364	473	403	363	576	428
NICARAGUA	(37)	497	8	435	375	385	408	438	408	377	464	423	444	643	476
PANAMA	(51)	504	8	304	416	402	412	470	409	351	451	344	365	559	451
PORTUGAL	(49)	557	8	400	480	420	428	566	408	441	634	464	407	639	485
BRAZIL	(294)	515	7	390	308	403	393	485	429	372	503	415	339	629	457
CHILE	(128)	524	7	462	474	435	397	522	413	410	505	435	384	614	447
SOMALIA	(14)	492	7	##	##	##	296	400	286	290	327	327	255	415	305
SWITZERLAND	(55)	576	7	476	542	502	452	575	507	406	526	476	419	702	542
YUGOSLAVIA	(41)	525	7	422	444	408	378	512	457	323	477	353	429	695	546
DOMINICAN REPUBLIC	(36)	496	6	343	377	337	343	386	379	365	490	418	304	436	376
GREECE	(424)	514	6	358	551	462	355	501	413	343	579	425	349	655	466
SYRIA	(53)	491	6	##	##	##	407	610	497	331	512	377	275	566	375
FRANCE	(297)	570	5	423	478	437	439	523	455	463	620	507	426	691	514
GUATEMALA	(42)	532	5	340	420	350	393	350	340	364	452	413	417	624	502
JAPAN	(894)	504	5	314	504	414	325	623	432	300	644	416	299	701	445
P. R. OF CHINA	(146)	##	5	340	519	367	355	520	383	263	632	410	209	683	425
TUNISIA	(19)	508	5	390	423	383	400	495	340	313	565	363	284	597	371
VENEZUELA	(396)	493	5	357	302	375	347	398	366	352	429	352	356	572	428
BOLIVIA	(24)	505	4	440	360	460	379	559	431	378	423	355	355	570	437
EL SALVADOR	(28)	512	4	390	415	355	388	440	404	337	410	337	411	621	509
ICELAND	(51)	502	4	418	475	458	391	527	451	355	5[illegible]	528	363	676	521
BELGIUM	(75)	505	3	464	544	504	461	555	512	477	620	499	447	609	551
MOROCCO	(32)	542	3	305	340	308	370	426	349	338	503	312	315	636	390
ECUADOR	(45)	502	2	328	405	328	447	421	433	346	419	351	300	582	428
SPAIN	(127)	549	2	394	490	429	421	562	466	416	593	492	403	648	505
CZECHOSLAVAKIA	(12)	559	##	270	450	370	400	637	557	330	420	347	465	645	520
IVORY COAST	(33)	490	##	##	##	##	287	470	294	308	427	317	314	499	317
PUERTO RICO	(12)	540	##	290	460	300	313	293	323	295	463	345	200	360	450